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An Address

ON

THE TRUE AIM OF MEDICAL EDUCATION AND THE EVIL OF THE EXAMINATION FETICH.

Delivered before the Hunterian Society on Feb. 15th, 1907,

BY LAURISTON E. SHAW, M.D. LOND., F.R.C.P. LOND.,

PHYSICIAN TO GUY'S HOSPITAL AND MEMBER OF THE SENATE OF THE UNIVERSITY OF LONDON.

GENTLEMEN,—The subject matter of the annual orations given before the Fellows of the Hunterian Society has not been quite so varied as might have been expected if every Fellow invited by the Council to undertake the duty had been given as free a choice of theme as was kindly allowed to me on the present occasion. Possibly in the earlier days of its institution the authorities expressed a wish that the address should deal definitely with the life and work of the great man whom now as then it is our delight to honour. Even without any such hint the entrancing interest of John Hunter's personality may have led my predecessors in this office to turn again and again to the pleasing task of laying before their fellow practitioners the stimulating example of this great researcher's life-long labours. Every medical man who studies the history of Hunter's life will be encouraged to do what lies within his power to forward the science and art of his profession. Need I then apologise for bringing before you the subject of medical education which in its broadest sense lies at the root of all medical progress? Education rightly carried out may enable every future medical practitioner to follow to some extent, however humbly, in Hunter's footsteps, but unintelligently pursued may so deaden the germ of observation with which all of us are born that none but a genius of the first rank will be able to rise above the dull level of average authority.

The records of the first years and the last hours of John Hunter's life afford material for thought to those interested in medical education. The absence of any formal instruction in school work such as at the present day constitutes what is called preliminary education has not escaped the notice of his numerous biographers. At the age of 21 years, when John Hunter commenced his study of medicine in his brother's dissecting room, it is certain he could not have passed the simplest preliminary examination in arts that has ever been imposed by any diploma granting body upon its intending students. No one, perhaps, would say that this absence of ordinary routine school education was the cause of Hunter's later extraordinary mental development. It is, however, an open question whether a firm disciplinary control by schoolmaster and university tutor over Hunter's earlier years might not have so curtailed his inquisitive and reflective faculties as to have changed one of our most brilliant thinkers into a merely successful practitioner. The failure of the schoolmaster to exercise control over budding genius is an outstanding feature in the biographies of many great men. The relation between this early refusal to be guided by masters and the subsequent power to lead mankind is worthy of careful study. Geniuses are too rare and too eccentric to allow us lightly to draw deductions as to the proper methods of their cultivation. This common feature in the early history of many brilliant men should, however, give pause to our efforts to force into a common mould every expanding brain for whose development we may be responsible.

Turning to the tragic circumstances of Hunter's painful and sudden death may we not speculate that the evening of our great man's life was sacrificed to his own appreciation of the evils of traditional bondage in educational matters? The excitement which caused his fatal heart failure at the age of 65 years was due to his vigorous protest before his colleagues at St. George's Hospital against the exclusion from the advantages of his teaching of men whose preliminary instruction fell short of official requirements. No doubt Hunter recognised that if the same barriers had been set up in his own case he would have been shut out from a career in which he could not but know that he had attained remarkable success.

While these incidents at either end of Hunter's life raise interesting questions as to the need and value of systematic education a perusal of his writings directs the reader's attention to the effect of its absence upon his own literary style. Professor T. Clifford Allbutt, whose keen criticism of his medical brethren's English hangs over all of us like a nightmare, can only forgive Hunter's defective powers of expression because of the genius of the man. "John Hunter," he says, "an illiterate genius clutching inarticulately at the evasive shadows of truth commands our labour and our time."[1] The two-fold power so seldom owned by one man of searching out the hidden facts of nature and of telling in clear language the truths that he has learnt will always command our highest admiration. The graceful literary style which lures us on to read the immature reflections of the untrustworthy observer is one of the most dangerous possessions. Might not a facile pen have too early drawn John Hunter from his bench to his writing table? If he could have told us more fluently what he saw would he have seen so much?

These aspects of Hunter's life and work serve to remind us of the great power for good or evil which the method of his education may have upon each individual of the medical profession. The society founded to commemorate Hunter's work seems a very proper body to consider how far this power is sufficiently taken into account at the present day. I submit the subject of this address to my fellow Fellows of this society confident of their interest in the matter and of their power to influence public opinion if they are convinced of the necessity of change. Improvements and modifications of methods of education are seldom welcomed by those actively engaged in carrying out existing schemes. If we would reform our universities we must not appeal exclusively to the Dons; nor can we rely on the initiative of the headmasters to remove defects from our great secondary schools. It is from the general public, and especially from the parents of intending scholars, that the motive power for general educational reform must come. In any movement for applying modern educational principles to the course of study for medical practitioners the Fellows of such a society as our own, showing by their fellowship their interest in the progress of medical knowledge and unfettered by the traditions that bind too many of our teachers, may surely be trusted to take an active part.

You will, I think, be glad to hear that it is to general principles rather than to details that I propose to ask your attention. I do not propose to enter into the vexed question of the length of the different stages of the curriculum nor of the actual subjects appropriate to each stage. On the much-debated point of the subjects of the preliminary education demanded before admission to technical instruction I will only say this. In my opinion the profession would be well advised to refrain from adding to the existing difficulties of the schoolmaster by requiring an intending medical student to specialise in any way during his school days. We want to give the best brains of the best boys from the best schools the opportunity of being devoted to medicine and we can well take the risk as to the particular material stored within those brains being of the sort we should expect *a priori* to be most useful.

The point to which I would particularly ask your attention is the blighting influence of the examination system upon the whole work of teachers and pupils from beginning to end of the modern medical curriculum. I desire to maintain the thesis that the examination fetich, if I may so call it, is year by year gaining a greater hold on medical education; that its influence is wholly detrimental to our true aims and has a demoralising effect upon both the parties engaged in teaching; and, moreover, that this is the case, notwithstanding the fact that the peculiar features of medical education make it easier than in almost any other branch of study to free ourselves from the trammels of the system if those interested could be brought to appreciate the evils of the present position. The task of gaining a general agreement upon the failure of present methods to secure our highest aims, though difficult, should not discourage us. The harmful influence of examinations upon learning has long been clearly recognised by educational experts and is daily gaining more general acceptance. In many departments of

[1] T. Clifford Allbutt: On the Composition of Scientific Papers.

education the fact that examinations still hold a prominent place is not due to any lack of hatred of their results but to the difficulty of finding an alternative. Amongst the official teachers of medicine, however, it does not appear that these evils are so widely recognised as by other bodies of teachers. This is the more to be regretted because, as I have just said, it is possible in medicine to set up without great difficulty alternative methods of securing what are supposed to be the objects of examinations.

To make my point clear I must first ask you to consider what is the true aim of medical education. It cannot, I think, be better or more briefly defined than by Matthew Arnold's statement of the true aim of education generally. "Its true aim," he said, "is to develop the powers of our mind and to give us access to vital knowledge." If this is the true aim we must consider how far the ideal modern examination is able to discover at the various stages of a man's curriculum whether his education has been carried out so as to secure this aim. The ideal examination of those who worship this fetich wholeheartedly is one conducted by an examiner who knows each candidate only as a number, or if, owing to the examination being a *viva voce* one, he must be brought into actual contact with a candidate shall not have seen him before, or at least shall have no previous knowledge of the "powers of his mind." It is an essential article of the true faith that an examiner of a candidate shall not have been his teacher. The only person who is really in a position to say whether the powers of the candidate's mind have actually been developed by the preceding course of study is ruled out of court when the result of that course of study is under scrutiny. What as a matter of fact can be tested by the ideally fair external examination? By an external examination I should perhaps explain is understood one in which the teacher has no part, it being usual to style an examination partly or wholly conducted by the candidate's teacher an internal examination. Only to the smallest extent can the powers of the mind at the moment be tested. One power of the mind can, perhaps, be tested by this means—the power which is commonly spoken of by teachers who are constantly engaged in a contest with external examiners as the knack of passing examinations—the ability to keep one's store of facts on the surface and to pour them out speedily in the presence of a stranger—the power which is essentially created and promoted by the crammer, a mixture indeed of memory and cheek. This knack is truly an attribute of mind, just as bulk is an attribute of muscle. It is just as illogical, however, continually to worry a man who is trying to develop the higher faculties of his mind with investigations as to his memory as it would be periodically to test the lifting power of a man who is learning to play the fiddle. The comparison between these two absurd processes is very real, for the sort of work that would increase the violinist's muscular force would actually lessen the subtle power of coördination essential to his art. In like manner does the cramming of a student's memory exercise a deteriorating effect upon his higher intellectual faculties.

How, then, is it to be explained that notwithstanding the growing appreciation of the limited power of the examination we in England came during the last half of the nineteenth century to make such extended use of it? The explanation is to be found in the fact that all Britons love fair play and a substantial majority hate patronage. They love fair play and they hate patronage much more than they believe in education. The apotheosis of the external examination took place at the time when the democracy growing in power decided that patronage could no longer be tolerated as the means of choosing candidates for positions of responsibility. The absolutely fair competitive examination first acquired its popularity, not as the final act in a course of education but as a preliminary step before conferring positions of honour or remuneration upon successful candidates. It came into general use to lessen the moral harm of nepotism which, hurtful as it was in an aristocratic and feudal community, became much more pernicious with the growth of commercialism and plutocracy. I cannot better illustrate the moral evils which the competitive examination system was intended to root out of our public services than by drawing attention to the hatred of the system by those interested in corruption. In a recently published American skit on municipal methods in that country there is a chapter on the Curse of Civil Service Reform. Mr. George Washington Plunkit, chairman of the elections committee of Tammany Hall, is there reported as saying: "When parties can't get offices they'll bust. They ain't far from busting point now with all this Civil Service business keeping most of the good things from them. How are you going to keep up patriotism if this thing goes on? You can't do it. Let me tell you patriotism has been dying out fast for the last 20 years. Before then when a party won its workers got everything there was in sight. That was somethin' to make a man patriotic. Now when a party wins and its men come forward the answer is, Nothin' doin', unless you can answer a list of questions about Egyptian mummies, and how many years it will take a bird to wear out a mass of iron as big as the earth by steppin' on it once in a century."

Even as a means of selecting suitable candidates the examination is coming to be recognised by others besides the bosses of Tammany Hall as very unsatisfactory. It may avoid moral harm to those engaged in selection by older methods and may insure absolute fairplay as between the candidates, but it constantly fails to secure the man best fitted for the vacant post. By no system of mere examination yet devised can the crammer and the special examination brain be got rid of. In India perhaps more than anywhere else in the British Empire has it been shown that the gift of passing examinations may often be the only valuable gift possessed by the candidate. Those who are most grateful to the examination system for the part it has played in freeing us from patronage must admit that as an instrument of selection it leaves much to be desired.

As an instrument of education the external examination became most widely used when the support of elementary schools out of public funds made it necessary to ensure that the education therein carried on deserved the approval and reward of the authorities. Here again we missed the true aim of education in the pursuit of absolute fairness. To decide in any school whether the powers of the children's minds are being developed it is necessary to rely on the word of the teacher and upon more or less imponderable impressions of the inspector. Herein lie risks of favouritism and inequality of rewards. By the external examination thousands of children can at the same moment answer the same question and examiners having no knowledge of who the candidates are or where they come from can with perfect fairness give the proper mark for every gradation of accuracy. Thus there can be distributed throughout the schools the fitting grant due to each for having taught its pupils the knack of answering questions. Fortunately, the folly of this system has now for some years been recognised so far as these children are concerned for whom the Board of Education is responsible. Something very similar, however, still obtains in the preparation of the children of the wealthy for their public school and university entrance scholarships.

In medical education, especially in London, we are to-day, except for the fact that there is no direct money payment from the State, in almost an identical condition to that of the elementary schools during the prevalence of the "payment by result" system. The teaching in our hospitals is being constantly interrupted by tests conducted by external examiners. For many of our students who are of average ability and do not fail to pass any examination such interruptions may occur as many as 12 times in the course of six years. And these interruptions are permitted to a series of courses of study which without them present almost an ideal opportunity for improving the powers of the pupil's minds. In almost every department of medical study and with proper organisation, it should be so in every department, the chief teacher and each of his subordinates is engaged in increasing the sum of knowledge of his special subject and in making and assisting others to make wise application of ascertained facts to actual problems before him. To associate the student as closely as possible in this double work of investigation and practice is to promote his education in the truest sense. The closest living contact between teacher and taught in mutual work is the surest way of developing the pupil's mental powers. But no sooner in the medical school do we introduce the student to his teacher than there is brought between them with chilling effect the spectre of the examiner. The absolutely fair person who with no knowledge of the candidate's work beyond a bare recital of satisfactory attendance at so many lectures and so many hours' laboratory work will proceed at the end of three, six, or 12 months, as the case may be, to test just those unimportant things that can be tested by examination.

Never can teacher or pupil forget the examiner's existence. Each is handicapped at every step by the question, Will this work pay? At the end of this hour's study shall I be a better answering machine? I have taught in a medical school for over 20 years and I know, alas, only too well, the sort of teaching that will "pay" in this sense. In a desperate desire to get my pupils through their examinations so that they could begin to work for work's sake, the only sort of work that's worth doing, I have deliberately crammed them. Often my conscience has revolted against it, and I have taken advantage of their faith in my powers to get them through their examinations by engaging them in work that would improve the powers of their minds. After a time my subterfuge would be found out. As I adopted one or other of these methods, the method of cramming or of attempted mental development, I could fill or almost empty my out-patient room with certainty. For with the best intentions none but the highest class of student can afford to seek true learning until he is through his examinations. Too often when this time comes the student is obliged to separate himself from his hospital, and if he still has a desire for learning he is handicapped by the isolation of private practice. But in many cases, whether thus handicapped or more fortunately placed, the student finds that his crammed brain is no longer capable of rational development. His desire for knowledge, his powers of observation, his capacity for reflection, his judgment, and his reasoning faculties have all been crushed, some perhaps out of existence, by the 15 or 20 years of systematic education that he has suffered under the domination of the examination fetich.

Some will no doubt regard this picture as over-coloured. They will recall their own experience as candidates at examinations and will fail to recognise such disastrous results as I have here portrayed. While the act of preparing for an external examination, as an alternative to some better educational occupation, must in all cases be detrimental, the evil effect is less, the less are the time and labour thereby entailed. Fortunately, so long as the examination is only a pass examination and has therefore to be adapted to the requirements of men of average ability, it does but little active harm to the man whose ability is well above the average. Educational policy is generally decided by men whose ability is such that they suffered but little from a system which may have done great harm to their inferior competitors. Even men whose brilliant genius has enabled them to secure the highest competitive prizes without material harm are sometimes inclined to regard their subsequent success as being a result of, rather than in spite of, their misdirected efforts. The withdrawal at the older universities and elsewhere of the system of placing candidates in order of merit, which culminated a few days ago in the abolition of the Senior Wranglership at Cambridge, is a recognition that the struggle to secure high places in such contests is bad for the brains of those that compete and does not further the true aim of education. It is true that many Senior Wranglers have done good work in the world and many useful medical practitioners are turned out despite our present system. Cambridge believes that in future the man who would under existing conditions have been Senior Wrangler will be a better man because he will be deprived of the opportunity of developing his mind on wrong lines. Those who desire to see the examination system altered in medicine believe that all those men who turn out well now might turn out better, and many who turn out badly now might turn out well.

Is there any profession in which the highest mental faculties are more necessary for even its humblest members than in that of medicine? What is the use of developing only the power of a man's mind to contain facts who is destined to practise in our profession? In such a progressive science the fact of to-day is the antiquated superstition of to-morrow. What we must aim at turning out of our schools is not the man primed with a complete knowledge of all possible beliefs held by his various examiners at the date of his qualification, but a man capable of criticising these beliefs with sound judgment even if he has never heard of them before. We must turn out men sufficiently interested in their science to watch with an even mind the shattering of these beliefs by its progress and able to estimate the value of others introduced to take their places. Every medical man should be capable of such accurate observation and true deduction that he may, however humble his practice, be able to make distinct contributions to the advancement of learning. Nothing has been more depressing in recent years than the progress of the idea that a special race of researchers must be bred to advance medical knowledge. Men who are to be freed from the routine of education or practice, safely shut away in their laboratories from students and patients, and prepared for their incarceration by a period of special study, preferably in Germany. In a recent controversy in the *Times* the development of such a class of researchers in neurology is advocated as the first essential step in dealing with the growth of insanity. Surely the first step is so to educate our medical officers of asylums as to make them capable of research and then to arrange their routine duties so as to allow them leisure to undertake it.

To encourage men's power of research or, as I should prefer to call it, the power of learning from everyday facts, must be our constant aim. This power exists in every sane human being at birth and it is the chief condemnation of most modern education that it tends to strangle instead of to cultivate it. If we could stop the strangling process so far as medical education is concerned and turn out all our students able to learn from what they see the result on the progress of medical knowledge would indeed be satisfactory. But apart from enabling him to take his share in the general advancement of science every private practitioner needs for his personal service to the individual patient a high development of his powers of observation and deduction. For the diagnosis of any case no amount of mere fact knowledge will avail the man who has not trained his eyes, ears, and fingers, as well as his brains, in a way not demanded in the pursuit of examinational success. This fact is indicated by the common observation at the hospitals that the best man at examinations often turns out the worst in the house appointments.

It is the fashion to upbraid our manufacturers for not finding places for university men in their works, as the wiser manufacturers on the continent and in America are said to do. How can we expect it to be otherwise when university education in England, dominated by the examination system, has such an influence even on medical students, that eminent surgeons, themselves examiners, have openly expressed the wish that they may never have a gold medallist in surgery appointed as their house officer. I have heard it stated, but can hardly believe it to be true, that in some medical schools the resident staff are selected by competitive examination. It is certainly an exception to find in any educational establishment, however successful in preparing students for examination, this system being used to select persons to carry on work within its own walls. Can we imagine a school in which the prefects or assistant masters were chosen in this way, or a university setting up a competitive examination to choose its professors? If we recognise that our house officers working under the control of their former teachers must have their powers of observation and sound judgment unimpaired, what shall we say of those who, immediately after their qualification, start forth into private practice? They do, indeed, require to maintain a judicial attitude of mind amidst the constant conflicts of rival methods of new treatments that will be submitted for their judgment. Is not the rich harvest of the synthetic chemist with his daily output of new hypnotics, nerve tonics, and cures for gout, are not the sudden rise and fall of so many methods of cure, whether by drugs, surgery, heat, light, or electricity, evidence of the need of greater development in medical students of those parts of the brain which preside over sober judgment and common sense. The ability to judge whether a new method of treatment is likely to be of value and of putting such method to a scientific test is not gained by learning by heart all the various means of treatment of every disease mentioned in the most complete system of medicine. A man who has in conjunction with his teacher properly established or failed to establish the efficacy of any single mode of treatment in a large series of cases has a sure basis on which he can safely found further experience.

One of the worst features of examinations is the tendency they have to be so conducted as to require the knowledge of an increasing number of facts from succeeding batches of victims. This raising of the standard, as it is called, is the only defence of the examiner against the crammer. Leave the number of facts required stationary and the percentage of successful candidates would steadily increase. By a careful study of examination papers and of the ways of particular examiners a teacher gradually learns to pack his pupils' brains with facts, with so much regard to the ease

of unpacking that the success of the dullest can be almost assured. To avoid this the conductors of every well constituted examination are constantly adding to the number and variety of the facts that may be dealt with in the questions. Thus is the time that has to be given to preparing for the examination increased. It is impossible in a subject like medicine to lengthen the curriculum, which therefore becomes more and more crowded with courses of didactic teaching.

This overcrowding of the curriculum deprives our students of the opportunities of developing qualities which, in addition to those I have above mentioned, are specially needed by them in their subsequent life's work—health of soul, health of mind, and health of body. For the development of all these leisure is essential and the aggressive tendency of the examination is largely responsible for its elimination from our schools. I know there are some who seem to believe in the verbal instruction of Watts's line about Satan and idle hands. That it is true in any case is due to the defective methods of preliminary education, upon which I cannot now enter. The boy should be taught to use his leisure, which indeed the very name of school implies, and the young man should have leisure to use profitably. Leisure is one of man's most blessed possessions and that it is the duty of each to endeavour to secure his proper share thereof and use it properly is a doctrine that should be preached by the medical profession. We should set our own house in order before we can hope to be successful preachers. Certainly our schools of medicine do not set good examples whether we look to the teachers or the pupils. As a first step to reform in this direction we should see that our students have reasonable leisure—leisure to strengthen their characters by doing such social service as lies at their hands, leisure to give their minds the rest which is essential to their development, and leisure to promote their bodily health by the necessary indulgence in physical exercise. All these things they need if they are to be useful medical practitioners, all these things they run a risk of not being able to secure owing to the ever-increasing demands of the examinational system.

While examinations are thus seen to be a distinct impediment to attaining the true aims of medical education the evil effect is greater in some systems of examination than in others. The evil is greater the more "external" the examination; it is less the more "internal." The external examination, it will be remembered, is the form I have described as the ideal of the true worshipper of the examination fetich. It is carried on by one who knows the candidate only as a number and who has no knowledge of the course of education he has pursued; indeed, in the extreme case the true worshipper cares not that the candidate has pursued any course of education at all. What he knows he knows and it matters not how he knows it. The internal examination, on the other hand, is conducted by the principal teacher responsible for the course of education, the result of which the examination is designed to test. In internal examinations which are part of a course of instruction at the end of which diplomas or degrees are granted an assessor or external examiner is usually associated with the internal examiner Inasmuch as one of the worst effects of the examination system is the introduction of a foreign and disturbing element between the teacher and his pupil, in the form of the unknown and unknowing examiner, the internal is less harmful than the external examination.

Whenever the teacher is the principal examiner the relationship between him and his pupils becomes at once more intimate. Each can afford to look into the other's mind. The teacher employing the experimental instead of the didactic method of instruction can lead his pupil into the paths of learning he is himself exploring regardless of whether they will lead to conclusions acceptable to the average examiner. Provided the powers of the assessor are not too great the teacher can devote himself to the business of improving his pupil's mind without anxiety as to the number of facts and theories that are being stored up. Nevertheless, there is always a risk that both teacher and pupil may allow their work to be subordinated to the interests of the examination and may even under this system forget the truth of one of Mr. Birrell's recent *obiter dicta*: "We tell whether a man has been well educated not by what he knows but by what he can understand."

Unfortunately, in medical education the external examination is a much commoner test than the internal and those who would minimise the worst evils of the system should endeavour wherever possible to transform external into internal examinations. It is, indeed, the necessary first step but it will not be an easy one. Its difficulty is well shown by the fact that in some educational circles the internal system is contemptuously spoken of as "branding one's own herrings." Perhaps the application of this commercial phrase to a matter of higher education in England is to be excused when one considers the economic conditions under which higher education has had to be carried on in this country. Even a professor must live and if it is recognised by critics that the unendowed professor's living wage or less depends upon the number of students he can attract to his class, it is perhaps not remarkable that he should be suspected of being capable of branding some of his unworthy pupils A1 in order to attract others to put themselves into his generous hands. To a large extent the curse of the external examination is the price we pay for the public neglect of medical education. Competition between unendowed schools prevents those in authority from trusting the teachers. The proper endowment of medical education by private munificence, as in America, or by the State, as in most civilised countries on the continent of Europe, would at once remove the chief obstacle to the institution of internal examinations. But even without adequate endowment it is possible to some extent to lessen the distrust of the teachers. By voluntary coöperation between the schools the spirit of rivalry may be eliminated and the staff may be brought to believe that mutual help may be as productive of good to education as the competitive methods of modern commercialism. By a fusion of the pecuniary interests of the schools it becomes possible to allow a free hand to the competent teacher in securing the development of his pupils' minds. The more the governors of our hospitals in university towns find themselves able to transfer to the university authorities the control of the purely educational part of their great charities, the easier will it be to assure the public that the teachers may be trusted. The medical schools in connexion with our voluntary hospitals must become to outward appearance as well as in fact public educational establishments, in order that the unwarranted suspicion may be removed that medical education is a lucrative business carried on for the private gain of the members of the staff who cannot therefore be trusted to "brand their own herrings."

Fortunately, there are indications that the public is beginning to appreciate its responsibility with regard to medical education and to recognise that endowment is as essential to the efficiency of medical schools as it is to all other institutions for higher education. Reform by this means will come slowly, and it is therefore fortunate that meanwhile other measures can be adopted to lessen the incubus of examinations, whether external or internal. It is because the study of all subjects in the medical curriculum is so essentially practical that this relief is at once possible. It has long been agreed that in all subjects in which it can be carried out the best education consists in the actual performance by the student of a properly thought-out course of observations, manipulations, and experiments, including, when feasible, real original work. This, which is usually called the experimental to distinguish it from the didactic, method of teaching permits of the preservation of records and results for periodic inspection. It is the method which the late Sir Michael Foster introduced with so much success into the biological school at Cambridge. I doubt if there is any subject in the medical curriculum which could not be treated in this manner, and I am sure that every subject would be the better from the educational point of view for being so treated. I need not go into details. Two subjects at either end of the curriculum will illustrate the point, biology and clinical medicine, in both of which I have had practical experience as a teacher. What would I not have given as a demonstrator of biology if I could have insisted on such a careful preparation of dissected specimens, diagrams, and drawings as would be entailed by the introduction of a system of daily marking for observations made and practical work done, accompanied by periodic inspection. How much more thorough and instructive would have been our work than that which we did in definite preparation for a single external examination at the end of the course. It is true there was what was called a practical examination, but the possible practical tests were exceedingly few and well-known beforehand, so that success really depended on the

student's memory of things described by the demonstrator, and the men who passed were generally those who had not spent too much time on dissection.

What would I not give now as a teacher of clinical medicine if it could be arranged that the work which the men do at the bedside, in the post-mortem room, and in the laboratories could be given in their eyes its proper relative value as compared with the facts they are told at lectures and read in text-books? Really there should be no difficulty in providing for all the tangible results of each student's practical work, his clinical records, his charts, his bacteriological, chemical and hæmatological reports, together with duly attested microscopical slides, heart and pulse tracings, photographs, and drawings to be kept available for surprise visits of the inspector who should satisfy himself that the work is being properly done as well as fairly marked. How much more valuable would all these records be than those prepared under existing conditions, when every ward clerk knows that it pays better to learn what the appearances of optic neuritis are said to be than to "waste" time, as he would call it, in seeing and making a diagram of a particular example. A physician or surgeon surrounded by his small army of students working on these lines, instead of by his present flock hungering for examination tips, might hope to prove false the statement that advances in our science can only be secured by a special class of researchers. Our wards might once more become centres of learning in place of centres of teaching. I must not detain you by picturing the millennium in medical education which will appear when examination is replaced by intelligent inspection. I should run the risk of being accused of overstating my case, but not, I believe, by those who have studied the principles of education.

Already inspection has entirely replaced examination in some branches of scientific studies carried on under the control of the Board of Education. In other branches of study, particularly in Engineering, the records of work done during the instruction course are allowed to count materially towards the marks for the qualifying examination. Even in medicine a pious opinion has been officially expressed in favour of the principle of registration and inspection. The Faculty of Medicine of the University of London has recently reported as follows to the Senate:—

> The Faculty is of opinion that a great educational advantage would be secured if the University were to extend its inspection to all practical work done by its undergraduates in each school with the object of allowing the report of its inspectors to carry some weight in the examinations for which the students are preparing. Though conscious of many difficulties the Faculty believes that such a scheme is possible and would urge the Senate and governing bodies of the schools to prepare for it.

Many difficulties are recognised in securing this limited use of inspection in conjunction with examination. But they will assuredly be overcome, and once the system obtains a footing it can hardly be doubted that it will ultimately be generally acclaimed as a highly satisfactory means of overthrowing the evil of the examination fetich and of allowing us to attain the true aim of medical education.

LONGEVITY.—The Rev. Hugh Pritchard of Llangaffo, Anglesey, commenced his hundredth year on Feb. 25th.—Mrs. Honor Coleman of Cleeve, Bristol, celebrated the anniversary of her birthday on Feb. 22nd, having attained the remarkable age of 106 years.

ST. MARK'S HOSPITAL.—Sir Richard B. Martin, treasurer of St. Mark's Hospital, presided at the seventy-first annual meeting of the governors on Feb. 14. In moving the adoption of the report he said that the committee had been compelled to sell out stock to meet pressing demands and that the sum of £1000 in new annual subscriptions is essential for the maintenance of the work at its present level. He referred to the high character of the nursing, which is so important a factor in the treatment of the distressing diseases dealt with by the hospital. Mr. F. Swinford Edwards said that the hospital gave special treatment to a special class, but though the cost of "dressings," &c., was of necessity high an examination of the details of expenditure showed that affairs were managed most economically. A notable feature of the year under review was that though cases of great gravity had been treated the patients were being passed through the hospital more rapidly than hitherto, in other words, they were being cured more quickly. The usual votes of thanks terminated the proceedings.

A Lecture
ON
FAINTS AND FAINTING.

Delivered at the National Hospital for the Paralysed and Epileptic, Queen-square, London, W.C., on Feb. 19th, 1907,

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GENTLEMEN,—You are all familiar with what is called a "faint"; many of you may know what it is "to faint," perhaps by your recollection of the first severe operation you witnessed. "Cardiac syncope," we call it in medicine. Our Anglo-Saxon ancestors called it "swooning," a word less used to-day than it was not long ago. It is related to "sigh" and perhaps arose from the irregular breathing often observed. "Faint" came to us through the French from the verb we still have in "feign." "Faint" was spelt indifferently with an *a* or an *e*. The latter spelling now retains the early meaning; with an *a* the significance has been differentiated into that which concerns us to-day. So great a change a single vowel makes, that a faint, if feigned, is a feint.

Familiar as fainting is, adequately as we seem to know it, there is much in it that we do not know. Our knowledge is just enough to obscure our ignorance. The most obtrusive feature of complete cardiac syncope is the loss of consciousness which results, evidently due to the failure of the action of the heart which precedes and attends it. But consciousness is not the result of the circulation of the blood. To say this is to state an obvious truism, for the two are totally different in nature. Hence the loss of consciousness cannot be the *direct* consequence of its *cause*. Its immediate cause must be a state of the nerve elements of the brain due to the change in the circulation. We are apt to overlook this when we think of the process of fainting, but its recognition is of great importance because consciousness may be lost from other causes. Its loss is the most common feature of the epileptic seizure. Not long ago it was thought to be a constant feature; without such loss an attack was said not to be epileptic. We now know that this is altogether erroneous. Minor attacks are common in which consciousness is only blurred, and in local spasm especially it may be unimpaired. Still, it is the dominant feature in each condition and it involves a relation between them of considerable practical importance. This is the greater inasmuch as the nature of the brain state on which it depends in each is unknown. We do not know whether it is the same or different in fainting and epilepsy. The only indications we can obtain depend on the discernment of any relation between the two.

Other questions regarding cardiac syncope need consideration. How is it that the state of the brain results from cardiac failure from the diminished circulation it causes? Perhaps the first reply that would be given to the question is that the heart's failure entails a diminution in the supply of nutrition to the brain incompatible with its function. But a little consideration will throw doubt on the adequacy of this mechanism. The renewal of nutrition of the nerve elements, the supply on which their metabolic processes depend, is from the plasma about them, derived from the blood, but for the time extravascular. At any moment the amount of this must be adequate to maintain the metabolic changes and the function that depends on these for a much longer time than that during which consciousness is maintained in syncope. How incompetent this influence must be to account for the loss is evident from the features of the fatal syncope of aortic regurgitation. The sudden death in this disease, rare though it is, is clearly syncopal. But the loss of consciousness seems almost synchronous with the cardiac failure. In this instance we cannot even conceive that it is due to the failure of nutrition.

Another mechanism, far more definite, consists in the mechanical effect of cardiac failure. The resulting diminution in the blood pressure within the cavity of the skull, not merely from the lessened arterial pulsation but from the lessened force exerted by the blood within the arteries, must

be great. It will be effective in proportion to its suddenness, as are all variations of intracranial pressure. The instance last considered, the sudden arrest of the heart's action in aortic regurgitation, must be mechanically equivalent to a "stunning" blow on the skull. In the more gentle failure of ordinary syncope the mere diminution in pressure is conceivably adequate to induce the alteration in the nerve elements on which unconsciousness depends. As I have said, we do not know its nature nor have we enough knowledge to formulate a probable conception of it. It may be thought of as a widespread retraction of cortical dendrites, interrupting their connexion with all lower centres, but it can only be as a speculation, of value only as a tentative aid to thought.

The features of ordinary syncope merit consideration. They are dominated by the failure of the heart's action. As this lessens in strength the effect is seen, especially where it has to raise the blood against the force of gravitation, in the pallor of the face, which the brain doubtless shares. We may reasonably infer this when a cause is operative which must act on face and brain alike; but we cannot assume that the brain is anæmic whenever the face becomes pale any more than we can assume that the brain becomes congested whenever the face is suffused with the blush of emotion. This by the way. In syncope we may regard the surface change as coinciding with that beneath the surface. With it there are a sense of increasing feebleness, often undue consciousness of the heart's action, some respiratory distress which may be manifested by sighing breathing, and frequently a sense of nausea. Dimness or loss of sight often precedes loss of consciousness, probably due to the lessened blood-supply to the retinæ. Of all structures the retina seems the most sensitive, as indeed we might expect. Sight may suffer without consciousness. A lad under some emotional excitement in a hot, crowded room, felt faint and went out into the cold night air for a few minutes. Feeling better, he returned to the room and found that he could see nothing—all seemed black. Sight gradually returned in the course of a few minutes.

It is doubtful whether true cardiac syncope ever causes absolutely sudden loss of consciousness, except when this is due to a fatal arrest of the action of the heart. It is seldom, if ever, so sudden as to cause a hurtful fall. As a rule, the deliberate onset enables the sufferer to lie down, when gravitation ceases to hinder the flow of blood to the brain, and the blood pressure is restored. The slow return of strength to the pulse and of colour to the face is attended by deeper breathing and gradually consciousness returns. With it from the first there is correct perception of surroundings, never the mental confusion and wandering or erroneous action that are common after minor epilepsy. On the other hand, after the latter there may be an instant return of a normal mental state, with no transitional sense of lessening prostration that is the usual mode of recovery from syncope. Moreover, it is important to emphasise the fact that in minor epilepsy, which alone can be confounded with cardiac syncope, there is never initial pallor of the face. This follows the onset. Error on this point is common because the patient is only closely observed after some feature of the attack has drawn attention to him. Much more frequently no change in the tint of the face is to be seen either before or after a minor seizure. This is true also of the pulse. The state of the vessels of the retina does not necessarily indicate a similar condition in those of the brain, but I once chanced to have those of the retina under clear view by the direct method of observation throughout a minor attack and no change in them could be seen.

We shall see better how imperfect is our knowledge of syncope if we consider the various causes by which the failure of the heart may be brought about. One obtrusive cause is loss of blood and another, similar in nature, is the withdrawal of a large amount of blood from the general circulation by its collection in one set of vessels. You know that fainting may occur when much fluid is withdrawn from the peritoneal cavity unless the abdominal vessels are supported by external pressure. This is, no doubt, the explanation of one of the commonest causes of fainting in strong men, violent diarrhœa or a violent purging. The flux to the intestinal vessels and the copious efflux from them render the amount of blood in the general circulation inadequate. The effect of a hot room is ascribed to a similar mechanism, the dilatation of the vessels of the surface, although in this case other influences may perhaps coöperate.

In all these cases how, we may ask, is the failure of the heart brought about? Is it produced by the diminished flow in the arteries of the heart or by the lessened quantity within the cavities being insufficient to excite the contractions? Or does the diminution in the blood-supply to the medulla oblongata excite an impulse in the pneumogastric which causes the heart to fail? The last involves two questions. Is the inhibitory influence from the cardiac centre in the medulla excited in it primarily by the change in the circulation, or is it due to the influence of this change on the cerebral hemisphere, the effect being focussed on the medulla? It may be useless to ask these questions, but few reasonable questions are wholly useless. The same questions apply to syncope from valvular disease of the heart.

Syncope is often due to a cause that can only act through the nervous system. It may be produced by a sudden intense pain, especially if felt in the abdomen or in the vicinity of the heart. The mechanism is supposed to be a direct action on the centre for the vagus, and this is rendered probable by the proved effect of such pain on the vaso-motor system. But syncope is only known to result if the pain is perceived. In man, I think, a cause of adequate pain has not been known to produce syncope if the patient was under the influence of an anæsthetic. Hence it seems doubtful whether the effect is due to a direct action on the vagal centre; the facts suggest that it is the result of a profound influence on the sensory regions of the cortex, focussed down on the cardiac centre in the medulla. The disturbance of the cortex must also be concentrated on the cardiac centre when syncope results from sudden intense emotion.

Remarkable also is the characteristic syncope that may be caused by the sight of blood. This must be purely emotional in its production. It does not seem to be caused by depicted blood, however realistic may be the painting. A special idiosyncrasy renders some persons liable to faint when certain odours are perceived, especially those of certain flowers, even such as are purely pleasant to the majority. By what mechanism the result is produced is unknown. It is difficult to conceive that the stimulation of the olfactory nerve has a direct effect on the vagus. It seems necessary for the odour to be perceived; so that here again the influence on the cerebral cortex may be necessary for the effect. There is much mystery in the part played by the cortex in connexion with reflex processes.

Since we are ignorant of the nature of the condition of the brain structures that underlies the loss of consciousness in syncope on the one hand and in epilepsy on the other, we have no means of discerning whether it is the same in each. We know only that it is spontaneous in epilepsy, coming on without any perceptible excitant, while in syncope it is induced by the failure of the circulation. The question gives special importance to any cases in which the two conditions seem to be connected, especially in which repeated syncope passes into minor epilepsy. Such a relation constitutes indirect evidence of the essential identity of the functional state in the two conditions. It is suggested by the following cases.

CASE 1.—A girl, when about seven years old, became liable to faint on any sudden start or alarm. The faints had all the characters of cardiac syncope; there were pallor, coldness, and gradual loss of consciousness. After some years such faints occurred without any sudden excitant and became more sudden in onset. When she was 17 years old one of these attacks passed into a distinct epileptic fit, with deviation of the head, general clonic spasm, and micturition during the attacks. This case may seem inconclusive, because the early attacks may have been possibly epilepsy with excitation of the fits, although this opinion is hardly consistent with the gradual development of unconsciousness, with preceding pallor. The following case is not open to this objection.

CASE 2.—A single woman, aged 34 years, had been liable for many years (12 or more) to apparently true fainting attacks, caused by excitement, over-fatigue, or a hot room. They began with palpitation of the heart and a sense of faintness, followed by gradual loss of consciousness, which did not become complete if she was able promptly to lie down, when she always began to recover. At the age of 25 years these faints changed in character. She became unconscious more suddenly and without any exciting cause; indeed, the onset was so abrupt that she often only knew that she had had an attack by finding herself on the floor.

Recovery was then by mental confusion, not lessening faintness, and at first she could not tell where she was.

CASE 3.—Another patient, regarding whom the facts could be ascertained with considerable precision, was a woman who became prone to faint in early girlhood, especially in hot, crowded places. In these she first became pale, felt faint, and gradually lost her sight, and then, if she tried to stay where she was, she lost consciousness. Usually, when sight had failed, with help she was able to walk out of the place. During the effort dim sight returned and the fresh air quickly restored her. These are the typical symptoms of cardiac syncope. Such faints continued until she was 30 years of age, when she became liable to sudden brief loss of consciousness in which she often fell and sometimes hurt herself. After these she usually slept and usually could not afterwards recall what had happened between the attack and the sleep. One occurred in a room with the door locked; the noise of her fall alarmed her friends, who knocked at the door. She got up and opened it, then she lay down and went to sleep, but afterwards remembered nothing of the incident. Such attacks were undoubtedly epileptic and after they began she ceased to be liable to the faints. She never had a convulsive seizure but the attacks continued until she came under treatment at 42 years of age, when they were arrested by bromide; she has since continued free. There were no heart disease and no family history of epilepsy, and no cause could be ascertained except the apparently disposing influence of the cardiac faints.

These cases present strong evidence of the influence of repeated cardiac syncope in disposing to epilepsy. They suggest that the state of the nerve elements that underlies the loss of consciousness in syncope may, by repeated induction, acquire a tendency to spontaneous development, which constitutes minor epilepsy. The following case presents a similar indication, slightly different in nature. Attacks of unconsciousness occurred with the suddenness of minor epilepsy, but after an excitant such as induces syncope.

CASE 4.—A married woman, aged 38 years, came under observation on account of slight hemichorea of two months duration. She had had an attack of chorea at 19 years of age, lasting for two months, and another at 33 years of age, lasting for six months. There was no heart disease. At the age of 34 years she cut her finger badly; two days later the bandage suddenly slipped off and at the sight of the cut she instantly fell unconscious, hurting her nose in the fall. She breathed heavily for ten minutes and then recovered. When she was 37 years of age she again cut her finger slightly and immediately became "dazed," became pale, and then lost consciousness for five minutes. The first of these attacks had the definite features of minor epilepsy in suddenness and character, although excited by an occasional cause of syncope. The second was due to a similar cause and resembled syncope in its less sudden onset and in the fact that pallor preceded loss of consciousness, but before the pallor there was definite disturbance of function in the brain. The features of these attacks are of obvious interest in relation to the question of identity of nature.

Whatever is the relation of the brain process in syncope and epilepsy the two are brought together in a very practical way by the frequent difficulty of distinguishing one from the other. The difficulty often exists when it should not, and in characteristic forms of either it can scarcely arise. That it is sometimes reasonable is evident from the fact that attacks that are originally syncopal seem sometimes to become epileptic. But when the diagnostic difficulty is not reasonable it may be very real. Its reality justifies a scrutiny of its causes, which is further justified by the fact that it reveals instructive features which might otherwise escape attention.

The error of regarding minor epilepsy as cardiac faints, which is the more common, is often promoted by the natural tendency to perceive the less grave. The distress that is caused by the recognition of epilepsy naturally deters from the diagnosis and causes all reasons for doubt to receive great weight. Inclination may distort the vision even of a well-balanced mind and cause a mental astigmatism, by which lines in one direction appear more distinct. Instances of this are very common. A pertinent example came to my notice recently, which conveys a special lesson in diagnosis. A patient with no relevant disease told me, as an unimportant incident, that he had recently fainted just as he had finished his dinner. He had taken nothing doubtful or unwise. On inquiry as to the features of the faint, it seemed that just as he had finished the meal before rising from his chair, he suddenly felt extremely sleepy and knew no more until he heard the words, "Are you better now?" from a companion who, seeing he was unwell, had saved him from falling off his chair. He had been unconscious about two minutes and became dusky in aspect. On recovering he was well almost at once. These are not the features of a cardiac faint. Such sudden, intense, brief sleepiness is not met with at the onset of syncope and is often met with in minor epilepsy; this is true also of the dusky tint, which indicates impairment of breathing, not of the heart, while the very sudden return to the normal state is also an epileptic indication. Whatever were its immediate cause and remote significance, it was certainly not a cardiac faint.

The error of regarding attacks as syncopal when their features indicate that they are independent of the heart is promoted not only by a tendency to take the milder view but also by the fact that sometimes their characters may suggest a cardiac origin. One of these is a sensation referred to the heart or its region. When it is really an epileptic aura, it seems to indicate that disturbance of the heart is the first element and that its failure causes the loss of consciousness. Such an error is the more easy because a cardiac aura is not common in epilepsy and its occurrence may even be unknown.

CASE 5.—A boy, aged 16 years, had "fainted" about a dozen times during a fortnight, nine months before he was seen, but not again until the previous week. During this he had fainted eight times, always in the day. In the first series, each faint had begun by a sudden stab at the heart, instantly followed by unconsciousness. In the later attacks the cardiac pain was also the first symptom, but was slighter and less brief and was accompanied by a sense of nausea and giddiness. After a few seconds he fell from sudden loss of consciousness. On its return, after a "minute," he struggled and had to be held down, evidently in the hysteroid state that so often follows minor epilepsy, but never occurs after cardiac syncope. Yet the case had been regarded as one of simple cardiac faints on account of the initial pain, which was really an epileptic aura. It is noteworthy that when it became more deliberate, the disturbance spread in the central relations of the vagus, causing the sense of nausea and associated giddiness, which are not uncommon but might have been thought to be evidence of a gastric cause.

Less frequently simple cardiac faints are thought to be minor epilepsy, chiefly when the patient is a member of a family in which epilepsy has occurred. Heredity naturally excites suspicion as to the nature of loss of consciousness.

CASE 6.—A girl, aged 18 years, whose cousin was epileptic, had suffered from loss of consciousness several times during the preceding year and the attacks were regarded as minor epilepsy. But each had occurred under conditions capable of causing cardiac syncope. Each began with pallor and a sense of faintness; in each sight failed first and then consciousness was gradually lost. There was no rigidity, and recovery, on being laid down, was by a slowly lessening sense of faintness, without any mental confusion. The opinion that they were simple cardiac faints was confirmed by complete recovery under tonics.

As the last case shows, the fact that an attack is excited by an external influence is important as confirmation of its syncopal nature, when this is also indicated by its features. Too much weight should not be placed on the fact that it is thus induced, unless the exciting influence is distinctly such as causes syncope. Even then it should be subordinate to the character of the faint. As a general rule, in the differential diagnosis of disease, symptoms must be combined and their relative weight considered. Distinctions are not always distinctive.

Epileptic attacks also are sometimes excited by an external influence, sometimes by such as might seem likely to cause syncope. A sudden noise, such as the sudden slamming-to of a door, may cause an attack of unquestionable minor epilepsy in those who are subject to it. A sudden sound is always, as we say, "startling." The "start" is a sudden movement which represents the instant motion to escape from danger, which is so familiar to us in lower creatures. Indeed, this may have led to the term "e-motion" as a designation of the class of mental processes of which the fear that excites movement out of danger is the most frequent in the animal world. The wide and instant effect

on the cortical centres renders it easy to understand that it should sometimes excite an epileptic seizure in those who are liable; indeed, we may feel surprise that the effect is so seldom met with. A sudden alarm occasionally induces a true faint, but the alarm is usually more profound than that caused by a sudden sound, and the attack comes on deliberately.

Sudden change of posture is an occasional excitant of loss of consciousness, and it may be regarded as evidence that this is syncopal if the change is to the erect posture. For the moment the flow of blood to the head must be hindered, but in some cases of undoubted epilepsy it may induce an attack. I had once an opportunity of observing such an attack. Consciousness was instantly lost; the patient became rigid and would have fallen unless supported; the conjunctival and pupillary reflexes were absolutely lost. Had it been syncope the onset would have been deliberate, preceded by pallor, and there would have been no rigidity. The mechanism of an epileptic attack thus induced is an interesting problem. The facts suggest the possibility that the sudden diminution in blood pressure, trifling as it must have been, may have caused the nerve elements to pass into the condition which underlies the unconsciousness of a complete syncopal faint. They again bring before us the question whether this may not be identical with that of epilepsy.

Stooping, lowering the head, has the opposite effect on the intracranial circulation; it tends to increase the amount of blood in the vessels, especially when combined with flexion of the neck, hindering the return by the veins, and with some effort, which is usually the object of the stoop. The fulness of the vessels thus induced seems sometimes to cause a momentary loss of consciousness, but this is not alone effective often enough to come into relation to our present subject. A more intense mechanical congestion is induced by severe paroxysms of cough, such as those of whooping-cough. They may culminate in a moment's unconsciousness, as if the sudden increase of blood pressure produced the same functional state of the nerve elements as its sudden decrease. I may mention an interesting personal observation by one of the most distinguished physicians of the last century who had an attack of whooping-cough when nearly 60 years of age. In many of the more severe paroxysms of coughing he had a moment's loss of consciousness. The impression his own sensation gave him was distinctly that this was not the effect of the mechanical congestion; it seemed to him to be due to a process of discharge spreading from that in the medulla which caused the cough.

To the case in which epileptic attacks were induced by standing up the following presents an instructive contrast:—

CASE 7.—A woman, aged 33 years, had epileptic attacks in the night, apparently of minor character but attended by micturition. They also occurred in the day and then began with a sensation of a sudden rush to the head, followed by loss of sight and then loss of consciousness. Automatic action followed the attack. One was so sudden in onset that she fell unconscious on the floor. Thus there can be no question of their epileptic nature. In her, stooping often induced a partial attack, there was a sudden rush to the head, and complete loss of sight, which gradually returned on rising, but there was not actual unconsciousness. Otherwise these attacks, induced by stooping, resembled closely those that were spontaneous. The lesson of the case is that repletion of the vessels and increased intracranial pressure excited the state of the nerve elements which constituted the epileptic seizure. The effect, moreover, bore some resemblance to partial syncope due to cardiac failure, but was more rapid in its course.

The connexion between the cases we have considered is the fact of loss of consciousness. If we realise that the state of the cerebral nerve elements on which it depends may be similar in both syncope and epilepsy, many of the facts of the cases I have referred to become more intelligible. In epilepsy the instability of the nerve elements causes them to pass, suddenly and spontaneously, into the same state as is induced more slowly by the failure of the pressure and flow of blood which result from cardiac syncope. We can then understand that such repeated induction of this state by failure of the heart may lessen their inherent stability, until the change may occur spontaneously as definite minor epilepsy. We can also understand that a change of position which lessens slightly the blood pressure may promote the onset of an attack of epileptic unconsciousness in those who are liable to this.

My chief object is to impress on you the fact that the functional state of the brain in syncopal unconsciousness is distinct from the failure of the blood-supply that causes it, and may be nearly the same as that which occurs in epilepsy, apart from the state of the circulation. Other objects are to direct attention to the uncertainty there is as to the precise mechanism through which the heart failure is induced by its various causes, the occasional causal relation of syncope to epilepsy, the problems of their diagnosis. Perhaps the first object I have just mentioned may now seem superfluous. The definite distinctness of the cerebral process may appear self-evident and it may seem that I have laboured overmuch to make clear that which needs no demonstrating. If so, I am well content.

ABSTRACT OF

The Milroy Lectures

ON

KALA-AZAR, ITS DIFFERENTIATION AND ITS EPIDEMIOLOGY.

Delivered before the Royal College of Physicians of London

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LECTURE II.[1]

Delivered on Feb. 26th.

KALA-AZAR AS A DISEASE.

MR. PRESIDENT AND GENTLEMEN,—In my first lecture I dealt with kala-azar as an epidemic, tracing its origin, spread, and decline, and referred to a similar earlier outbreak in Bengal known as "Burdwan fever." To-day I pass on to describe the disease itself, its course, complications, and terminations, and shall show you that it is not one whit less terrible when considered individually than collectively, for it literally kills by inches after most prolonged sufferings, which we are still powerless to check to any great extent. As the latter stages of the disease are much better known than the earlier ones it will be clearer if I first describe the typical advanced condition, returning to the still rarely recognised commencement of the fever.

[With regard to the general appearances in the characteristic stages of the disease kala-azar, a number of lantern slides showing groups of cases were shown and the salient points of each were described, the main features being the marked contrast between the tumid bellies due to the very great enlargement of the spleens and sometimes also of the liver, contrasting with the great wasting of the chest, face, and limbs. Brief notes were given of a group of hospital cases which illustrated the different courses that disease might take, while a village group showed the great frequency of the affection in children, just as in malarial fever, the incidence decreasing steadily in the subsequent decades. Other groups of sporadic cases, then known as "malarial cachexia," in the Sylhet Valley, which was not invaded by the epidemic, showed the clinical identity of the two forms of the disease, which was the principal argument of the lecturer in his 1897 report in favour of the epidemic disease in the Brahmaputra Valley being but an intensified form of malarial fever. The extreme wasting in the last stages and the occasional dropsical ascitic complication produced by a peculiar form of intracellular cirrhosis of the liver were also illustrated. The lecturer then proceeded:]

Family distribution.—Several of the cases already referred to illustrate very well the extraordinary tendency of this disease to attack a number of persons in the same family or household, but the frequency with which this is the case will be better realised from the following figures relating to 20 successive Assamese patients seen in the Nowgong Hospital. Among their near relatives no less than 123 persons had been attacked by kala-azar, only two of whom recovered from it, while but 44 had escaped the infection, or, to put it

[1] Lecture I. was published in THE LANCET of Feb. 23rd, 1907, p. 486.

another way, no less than four-fifths of these patients had lost half, or more than half, of their relatives within from three to five years, so that it is easy to understand how whole families have been destroyed and so much land has fallen out of cultivation.

A similar family incidence is seen in the sporadic disease and is best illustrated by a European series of cases, in which it is easier to follow up the histories. An examination of my notes of the Calcutta European Hospital cases of the last six years shows that the most common relationships between patients actually in hospital for the disease were parent and child in six instances and brothers and sisters in seven more, nearly always children, while in no less than three of these instances more than two children of the same household were admitted, the series in one family extending over a period of five years. Moreover, just one-third of the whole series of cases had relatives actually in hospital during this period, while a good many more gave histories of other members of their families being attacked with fevers of long duration, which were pretty certainly mostly of the same nature. This family incidence clearly points to a house infection and was the basis of the successful measures which I advocated against the disease.

The histories of the rare cases in which Europeans in Assam were attacked by kala-azar throw some further light on this question, for in all the six cases, regarding whom Mr. J. Dodds Price kindly furnished me with information, the affected men were in the habit of cohabiting with native women either in the infected lines or in three instances with one woman, who was subsequently found to be infected with kala-azar, two of them subsequently dying from the disease. Two of these last cases of infection were most important, as they occurred in parts then uninfected with kala-azar, but in each case the woman had come from an infected district. Moreover, Mr. Price knows of no instance in which a European cohabited with an infected native woman who escaped kala-azar; and when we bear in mind that it is the usual custom for such women only to come to the bungalow at night and not to eat with the European, then it becomes clear that the most likely mode of infection by a parasite occurring in the peripheral circulation is through some biting insect, in which the parasite may pass its extracorporeal stage of existence. Moreover, such a source of infection may furnish a clue to that of adult Europeans with no family history to explain it in large towns such as Calcutta, as well as among soldiers in Bengal cantonments, and is also in accordance with the increasing age incidence after early adult life to be mentioned immediately. Again, the infection of one child after another in the same house may be also readily explained on the same hypothesis, and indicates the importance of isolating, at least in a separate room, any person attacked by the disease, or better is a hospital where persistent treatment and nursing can be carried out.

Age and sex incidence.—Among tea-garden coolies, who furnish the most accurate statistics, there was no difference in the incidence of the disease on the two sexes, nor did occupation affect it. Numberless instances of husband and wife being infected one after the other were met with, it being, in fact, the exception for one of them to escape: another striking instance of house infection. In the sporadic disease in Calcutta an excess of native males are admitted, much in proportion to those of other diseases. In the European hospital there were twice as many males as females above the age of 15 years, possibly partly due to the source of infection just mentioned, but in children under 15 years of age there were 23 females to 13 males, probably due to a larger proportion of the male children living away from home at schools.

The *age incidence* is of great importance, the most striking fact being the number of children attacked. In my report I recorded that 25·6 per cent. of my cases occurred in children under 10 years of age, while 24·4 per cent. more were between 10 and 20 years old, making 50 per cent. under the latter age. Further, in a more recent report on the sporadic disease in Sylhet, 39 per cent. were under 10 years and 30 per cent. more between 10 and and 20 years, making nearly 70 per cent. under 20 years. Among natives in Calcutta only 8 per cent. were in children under 10 years, but 40 per cent. were between 10 and 20 years, three-fifths of which were boys from 10 to 15 years old, who are much more readily brought to hospital than girls or younger children. Between from 20 to 30 years of age there were 32 per cent., 16 per cent. from 30 to 40 years, and only 4 per cent. over 40 years. Among Europeans, who readily bring their children to hospital, 20 per cent. were under 10 years and 22 per cent. more between 10 and 15 years, making no less than 42 per cent. 15 years of age or under, 22 per cent. from 20 to 30 years, and 20 per cent. over 30 years, showing once more a very high rate among the unfortunate children and a decreasing one with advancing age.

Race incidence.—It has already been mentioned that epidemic kala-azar was rare in Europeans in Assam compared with natives, but is not so very uncommon in Europeans in Calcutta in the sporadic form. The class of Europeans attacked is here of great importance, for out of 87 cases, regarding whom I have a note as to how long they had been in India, I find that no less than 87·34 per cent. were born and bred in that country and only 12·66 were immigrants from Europe. Moreover, the shortest time after arriving in India that any immigrant was attacked was eight years, a second had been 13 years, and a third 19 years in the country, while the remaining eight had all been over 20 years in India and belonged to the same class as those born in Calcutta, and, like them, were living in parts of the city where their houses were surrounded by those of native inhabitants and under conditions of overcrowding and bad sanitation. In fact, almost all these unfortunate people belonged to the poorest sections of the mixed European and native population, among whom the sanitation and cleanliness of the well-to-do official and commercial European immigrant class are an impossibility, a fact of great importance in connexion with the etiology of the disease. In marked contrast with this is an observation that I have recently made to the effect that 80 per cent. of the European immigrants admitted to hospital for typhoid fever in Calcutta had been three years or less in India, for the totally different incidence of sporadic kala-azar just mentioned in this class will prove a useful point in the differentiation of the latter disease in its early remittent stage from typhoid fever, with which it has been so much confused.

SEASONAL INCIDENCE OF KALA-AZAR.

Owing to the disease lasting from a few months to several years cases are admitted to hospital at all seasons and neither in Calcutta nor Madras is there any very marked seasonal incidence, although there is some excess of admissions of Europeans in Calcutta at the end of the cold and beginning of the hot season, especially among those coming in the early stages of the fever. Of much greater importance is the question whether the fever begins at any special season, as is suggested by the fact that the extracorporeal stages of the parasite, to be described later, only developed in my cultures below a temperature of 75° F. It is very difficult to obtain accurate histories of the beginning of the disease in many cases, especially when they are seen for the first time at a much later date, but an analysis of my notes of those patients who stated that they had had fever for not more than six months in two series of cases, in the Native Medical College and European hospitals respectively, both showed a marked preponderance commencing during the cold weather or early in the hot weather on account of the frequent long incubation period. These results can be summed up by saying that in the six months from November to April there were three times as many cases in the European series and almost four times as many in the native one as in the remaining six months of the year, a sufficiently striking fact when the difficulties of getting accurate data are considered. When in Assam I tried to work out this point from the admissions to hospital for fever on tea estates and found that most of the patients suffering from typical kala-azar in the cold season had been admitted for short attacks of apparently malarial fever in the previous rainy season from June to October. On finding that the sporadic cases in Calcutta mostly began in the cold season I wrote to Mr. Price for his matured experience on the subject and he very kindly sent me histories of all his European cases, every one of which had commenced in the cold weather, while an inquiry into his then comparatively few native patients also showed that almost all of them had developed kala-azar during the cold weather and he added: "All this is very instructive and fits in exactly with your Calcutta experience."

Taking everything into consideration I think there is sufficient evidence to prove that the great majority of patients become infected in the cold season, and I am inclined to think that infection will ultimately be found to be limited to this time of the year. The importance of this fact in connexion with prophylactic measures is clear, as it

will greatly simplify matters if precautions against infection have only to be taken during a few months of the year.

THE TYPES OF FEVER IN KALA-AZAR.

I now come to the difficult subject of the diagnostic value of the types of fever in kala-azar, my conclusions being based on four-hour temperature charts of every case in the European Calcutta Hospital for several years, and a still larger series in native patients, while as I also possess complete notes and charts of every fever case in the open wards of the European Hospital for two years, I am now in a position to point out the most important features in the diagnosis of kala-azar in the difficult early stages from other fevers with which they are commonly confused. The lantern slides prepared from the charts, some of which represent the temperature curves for several months, will best serve to illustrate the types met with.

[The principal points illustrated by the charts shown were the following. The very long duration of the fever, which shows alternating remittent and intermittent types for many months at a stretch, even in the case of patients admitted in a markedly cachectic and anæmic condition, showing the great resisting powers of his patients. When the temperature is of the remittent type there are rapid wasting and impoverishment of the blood, but when it falls to the low intermittent type both the weight and the blood show steady improvement, while quinine in large doses has a marked effect in reducing the high dangerous type of fever to the low comparatively harmless one which may eventually wear itself out and cease entirely, and then the weight is soon regained, and once the patient has been free from fever for two or three months and fully regained the normal weight relapses do not occur and recovery is permanent and complete. Such cessation of the fever and cure sometimes follow a severe septic complication, such as cancrum oris, and are then accompanied by a marked rise in the previously very low number of polynuclear leucocytes, which the lecturer has also been able to produce with good results in a few cases by injections of sterilised cultures of staphylococci, in accordance with the methods of Sir A. E. Wright, although this treatment has not been invariably successful. The good effect of large doses of quinine was illustrated by a nine months chart of a child, aged eight years, seen early in the disease, and whose fever was only finally broken when 50 grains of quinine had been taken daily for seven weeks, her weight also steadily rising from the time this large dose was given, no ill effect being produced by it. The recognition of the fever of kala-azar in its early stage, which usually begins with a high remittent form of pyrexia, may often be accomplished by noting certain peculiarities in four-hour temperature charts. The most important of these, which was illustrated by several slides, is what the lecturer has already described as the double remittent type—namely, a marked daily double or triple rise of the temperature, often for several days together, in the absence of any treatment by the more powerful sweat-producing antipyretic drugs such as antipyrin. This double type is most frequently seen in the earlier periods of the fever, but may occur at any time in its course, and may also occasionally appear during continued or intermittent pyrexia in kala-azar. The great importance of this type is that, in the lecturer's experience, it has never been seen in typhoid fever, for which the early stage of sporadic kala-azar is so frequently mistaken, as in some of the cases illustrated, and this type is almost diagnostic of the new fever, the first case in a European in Bombay having been first suspected on account of the double remissions taking place. Another type of fever shown in the lantern slides, which is rather characteristic of this fever, is a low continued type of pyrexia, the temperature falling below 101°F., but not varying more than 2° in the 24 hours; a type which is much rarer in typhoid fever, in which the pulse is also usually slower than in kala-azar in proportion to the degree of the pyrexia. Moreover, even when the fever is high for long periods in kala-azar there is a characteristic absence of severe distress or typhoid symptoms, patients often saying that they feel quite well and do not think they have any fever, when the thermometer registers 103° or 104°. Once more, when the remittent temperature falls it commonly assumes a low intermittent type, rising to about 100° every afternoon, instead of running a subnormal course as after typhoid fever, a feature that will often allow of the more serious kala-azar being suspected at an early date before the cachectic stage has been reached. A consideration of these various types will nearly always allow of the sporadic affection being suspected at an early date, when persistent treatment is most likely to be of avail, while the blood changes will allow of the diagnosis being confirmed.]

THE SPLEEN AND LIVER IN KALA-AZAR.

Time will not allow of my giving a full clinical account of this remarkable disease (although I hope to do so shortly in a work on Fevers in India, for which I have been collecting material for a number of years), but a few more of the salient points must be touched on.

The spleen.—The great degree of enlargement of the spleen can best be indicated by the following data. In 70 typical advanced cases of the epidemic disease in Assam of which I have notes the spleen was enlarged in all, while in 94·5 per cent. it reached to at least three inches below the costal margin, in 56·5 per cent. it extended to the navel or beyond, while in 27·7 per cent. to the level of the anterior superior spine of the ilium. In 95 consecutive sporadic cases in the Medical College, Calcutta, all verified by finding the parasite in the spleen blood, in 80 per cent. the organ reached to the navel or beyond and in 10 per cent. to the anterior superior spine of the ilium. In a series of earlier sporadic cases at the European General Hospital the spleen extended to the navel or beyond in 63 per cent., being nearly always of this size in cases of over three months duration, although the edge was above the navel in three-fifths of the cases with under one month's history of fever. On the other hand, among 200 healthy coolies I examined in Assam on a tea garden when unaffected with kala-azar I found only 1 per cent. with spleens reaching down to the navel, in only 6 per cent. did it extend three inches below the ribs, while in a total of 25 per cent. the organ could be felt below the ribs—figures which suffice to disprove Dr. G. M. Giles's statement that it would be absurd to attach any importance to enlargement of the spleen in kala azar in such a malarious country as Assam.

The liver.—This organ was enlarged in 93 per cent. of my Assam series, in 75 per cent. of the Medical College, and in 59 per cent. of the European cases in Calcutta, who came earlier under observation, it having been normal in seven-eighths of these European patients admitted during the first month of the fever. The enlargement of the liver to any marked degree is very uncommon in the earlier stages, although after some months it may occasionally reach down to the navel and may then be even larger than the spleen, and eventually become cirrhosed, causing ascites.

The blood changes.—I have elsewhere described the blood changes in kala-azar and pointed out their great value in differentiating it from other diseases, especially fevers, so need only now summarise them. In the first place, an increase in the percentage of the large mononuclear leucocytes is very common and of great value as a point in the differentiation of the early stages of sporadic kala-azar from typhoid fever, for in the latter the lymphocytes, but very rarely the large mononuclears, are increased during the pyrexia. On the other hand, this change is of no help in distinguishing kala-azar from true chronic malaria, in which a large mononuclear increase is also commonly present. These two last diseases may, however, be distinguished by counting the total red and white corpuscles and working out the proportion between the two, for in malaria both are about equally reduced, so that the ratio of white to red remains normal—namely, about 1 to 750—and very rarely, if ever, falls below 1 to 1000, while in kala-azar it is the rule for the white corpuscles to be disproportionately reduced, so that the ratio of white to red is, in the absence of any leucocyte-increasing complication, commonly below 1 to 1500, and not rarely as low as 1 to 2000, 3000, or more. This extraordinary reduction of the leucocytes, which not rarely number but from 500 to 1000 per cubic millimetre, is almost diagnostic of kala-azar, as I have never met them in any other fever cases out of several scores in which I have done blood counts, and it has often enabled me to diagnose the disease in a comparatively early stage. So much is this the case that I now rarely employ the spleen puncture as a diagnostic measure, several fatal cases in addition to those published having come to my knowledge. It should never be done in very anæmic patients or in those who have suffered from any form of hæmorrhage unless the blood is first proved to be clotting normally, while I always take the further precaution of keeping up digital pressure for several minutes after withdrawing the needle and immediately administering a dose of calcium chloride by the mouth. With these precautions it may be of value in some difficult comparatively

early cases in which the confirmation of the diagnosis is of great importance in order to allow of continued and adequate treatment being strongly urged on the patient, so many of whom leave hospital during a temporary remission of their fever and leave off the all-important quinine until a fresh high remittent bout comes to reduce them another stage towards the grave.

COMPLICATIONS OF KALA-AZAR.

The frequency with which kala-azar is terminated by some inflammatory complication may best be illustrated by the data from 40 necropsies made by me at the Medical College Hospital. All but seven of them showed some serious local disease, and some of them more than one. In 11 pneumonia, in ten dysentery, in seven cancrum oris, in two each pneumococcic meningitis, purpura, cerebral hæmorrhage, and pulmonary phthisis respectively, and in one pericarditis were found, while in several cancrum oris cases staphylococci or streptococci were cultivated from the spleen, revealing a general septic infection. The extreme reduction in the polynuclear leucocytes in this disease, in which they not rarely fall to one-twentieth or less of the normal numbers, easily explains the frequency with which these patients fall victims to the specific organisms of pneumonia, dysentery, pulmonary phthisis, or the cocci of cancrum oris in which I have never been able to find the diphtheria bacillus, which has been met with in European cases of this disease.

Hæmorrhages deserve special mention among the complications, reduced coagulability having been found by me in some of these cases, while bleeding from sloughing ulcers or from the stomach or bowel has also been seen, in addition to several cases of bleeding into the brain or its membranes.

THE TREATMENT OF KALA-AZAR.

Although much has been done to elucidate the pathology of kala-azar during the last four years, unfortunately the treatment of the disease has made no corresponding progress and is still in a most unsatisfactory state. In Madras, indeed, I am informed that almost every case is believed to die, the mortality being estimated at 98 per cent., the highest figure reached in the Nowgong tea estates by the epidemic form, while that of several hundred cases treated by Mr. Price at the height of the epidemic gave an average mortality of 96 per cent. Mr. Price's cases were treated with thymol first to exclude ankylostomiasis, and quinine in moderate doses being generally used during the several periods the patients were in hospital, for it was the common opinion that quinine failed to check the fever in the same way that it did malaria, and many thought it quite valueless and used it very little, as is also the case in Madras at the present time. In my report I strongly dissented from this view and urged that quinine did have a definite effect in controlling the severity of the fever, even when it did not stop it altogether, and recommended that it should be given in large doses and persisted with for months together if necessary. Further experience in Calcutta has only served to confirm me in that opinion, for I have repeatedly seen a high remittent fever reduced to a comparatively harmless low intermittent one by increasing the quantity of quinine given, 60 and in some cases 90 grains a day having been taken for considerable periods with nothing but good effects beyond being sometimes distressing to the patients. Once the temperature has fallen to the low intermittent type it can often be kept down to that point for a long time by smaller doses, one of 20 grains in the morning being commonly effectual. That this line of treatment has given far better results than those admitted by unbelievers in it will be clear from the fact that after the publication of my report Mr. Price systematically tried persevering quinine treatment, and when he worked out for me the results of several years' experience he found that the mortality of 500 consecutive cases was but 75 per cent., the remaining 25 per cent. having permanently recovered against 4 per cent. in the earlier series quoted above. Now as these patients were indentured coolies, who remained working on the gardens, often for years, after getting over a typical attack of kala-azar (the diagnosis of which in its characteristic stages presents no difficulties at the present time to Mr. Price with his 15 years' daily experience of the disease, while in some of them the parasite was also found by spleen puncture), there can be absolutely no doubt about their permanent recovery, some of them having also been seen by me both during and after their attacks.

Moreover, these unquestionable results of Mr. Price are confirmed by my smaller experience in Calcutta under less favourable conditions for following up my patients. Thus, out of 65 cases in the European hospital, during the last three years of which I have notes, 18 who left the hospital in a doubtful condition I have not been able to get further news of, leaving 47 cases. Of these 47 cases 21 died either in hospital or after leaving it, 9 more who left in a worse condition than they came may be counted as having died, leaving 7, or 14·88, who left hospital after having lost their fever and greatly improved, a fair proportion of them probably recovering, and 10, or 21·27 per cent., have completely recovered and are known to have been well for from several months to upwards of a year after leaving hospital. It should be mentioned that three of the patients who recovered had also been treated with injections of staphylococcus vaccine, which appeared to have some good effect.

These figures are in close accordance with those of Mr. Price and contrast most favourably with the nearly invariably fatal results admitted by those who still deny their patients the benefit of persistent quinine treatment, although without any efficient remedy of their own, and I venture to think that in view of the above data my line of treatment should never be neglected until we have a better one to replace it, as I hope and expect will be the case in time. Bone-marrow in tabloids, to repair the blood deterioration, is also of considerable value; arsenic is worthy of trial, while in the form of atoxyl, which is now being advocated in the allied protozoal disease, sleeping sickness, my friend, Captain J. W. D. Megaw, I.M.S., has injected in two cases with at least temporary good effects. Colonel C. P. Lukis, I.M.S., Principal of the Medical College, Calcutta, has also tried cinnimate of soda to increase the leucocytes, but without accomplishing the desired result or doing any good, while x rays over the spleen have been tried by the same observer, but without effecting any cures. In view of the chronicity of the disease and the occasional remarkable spontaneous recoveries from an apparently hopeless state much caution is required in making deductions regarding any line of treatment, but the extraordinary cures which do occur encourage the hope that a better treatment, even than the quinine one, will be found to rescue these unfortunates from the lingering death which still awaits the great majority of them.

THE DISTRIBUTION OF SPORADIC KALA-AZAR IN INDIA.

Since it became known that so many cases previously classed as "malarial cachexia" are but the sporadic form of kala-azar observations on its distribution have been accumulating. Donovan and others have found it to be very common in Madras, while my own observations have shown it to be widely distributed all over Lower Bengal and Assam, except the eastern part of the Brahmaputra valley, while it also occurs somewhat less frequently in Western Bengal or Bihar, and extends into the neighbouring eastern end of the United Provinces of Agra and Oudh, cases in soldiers having been verified by the officers of the Royal Army Medical Corps at Benares, while I have also seen two soldiers who appear to have contracted the disease in Allahabad, and others have been met with among Gurkhas in as far west as Debra Dun. On the other hand, during an examination of the records of all the fever cases admitted to the Lahore Medical College Hospital for three years I failed to find any cases resembling sporadic kala-azar, while it is also specially noteworthy that I met with no double remittent, low continued, or other doubtful long fevers among them. The Bombay records also show a similar absence of the disease, except rare importations from Madras, so that the disease appears to be limited to the eastern side of India, although I am informed that Burma, like Bombay, only has cases contracted at Madras.

In connexion with this distribution it is of interest to note that the areas affected all have a very mild cold season, during which the mean temperature for three or four months remains between from 60° to 75° F., for I shall show in my concluding lecture that these are the limits between which I have been able to cultivate the parasite outside the human body. On the other hand, in the unaffected north-west parts of India the mean temperature during the cold months falls below 60°, while owing to the brevity of spring and autumn in India the temperature conditions most favourable to the organism outside the human body is a very short one in those areas.

EFFECTS OF SEASONAL VARIATIONS ON THE PREVALENCE AND ORIGIN OF THE DISEASE.

I have already shown that the infection of kala-azar is probably limited to the cold season, so an exceptionally long spell of cold weather might be expected temporarily to increase

the occurrence of the disease. This is actually so, for two years ago such a cold season occurred in Bengal, and during it and the following early hot weather months an unusually large number of sporadic kala-azar cases were admitted to both the native and European hospitals of Calcutta, many more than in the following year with a normal cold season. Now this long spell of cold weather followed an early cessation of the previous monsoon rains, for the withdrawal of the south-west monsoon is succeeded by a cold north breeze, and it will be remembered that in my first lecture I pointed out that the Assam epidemic arose as a consequence of four out of five successive years of deficient rainfall in the early "seventies," due to an early cessation of the monsoon current. I have not been able to get complete meteorological data for the Rungpore district in the "seventies," but those of Calcutta of that period show that during several of the years of deficient rain the mean temperatures of the ensuing cold season were below the average. Now, if a single cold year had such a marked influence in increasing the sporadic kala-azar in Calcutta, on account of the longer period which was favourable to the infection, it becomes easy to understand how an unusual succession of such seasons might have increased the number of cases, and so the foci of infection, year by year, until the fever became so widespread that the people began to leave their villages and thus carried the infection into areas at the foot of the Garo hills and in the Goalpara subdivision, which had hitherto been almost or quite free from it, and so started the spreading the disease in Assam in a people who were extremely susceptible to it owing to not having previously suffered from the sporadic form. Such an origin of the Assam epidemic of kala-azar is most in accordance with the known facts of its history, and also with the life-history of the parasite and mode of infection, which I shall deal with in my remaining lecture.

ABSTRACT OF

The Morison Lectures

ON

INSANITY, WITH SPECIAL REFERENCE TO PROGNOSIS.

Delivered before the Royal College of Physicians of Edinburgh on Jan. 28th and 30th and Feb. 1st, 1907,

BY A. R. URQUHART, M.D. ABERD., F.R.C.P. EDIN.,

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LECTURE I.[1]

Delivered on Jan. 28th.

IN no kind of disease is prognosis more doubtful than in insanity. For long overshadowed by ignorance and superstition, for long regarded as a mysterious calamity, for long obscured by confusing issues, it is only of late years that the fundamental truths have been disengaged from the fantastic phenomena which formerly dominated the attention of the observer. The long-drawn melancholy, the violent excitement, the bizarre ideas, and the dangerous conduct of the insane wholly occupied attention and precluded the study of obscure and elusive bodily conditions. The tedious recital of aberrant talk and morbid conduct long detained us with mere irrelevancies. It is unnecessary to discuss the history of medical literature dealing with insanity, until the memorable publication of Schroeder van der Kolk's lectures on Mental Diseases, which took shape about the middle of last century. He arrived at the conclusion that much insanity is due to morbid conditions of the great intestine. In accordance with the medical ideas of his time he described this class of cases as "sympathetic insanity." While he clearly recognised the brain as the organ of mind, he believed that it is liable to disturbance in direct consequence of somatic conditions, influencing it in a secondary manner. This conclusion was widely supported, and here in Edinburgh the influence of the body on the mind was definitely fixed and crystallised by Skae's classification of mental diseases.

It is almost impossible to gain any useful information from old asylum records. In the earliest series the recorders note the reception of a lunatic and briefly indicate that he was furious or fatuous, sometimes adding an account of heroic doses of medicaments, blistering, and bleeding, and sometimes an indication of removal by death or otherwise. At a later period the cases are described as psychological curiosities—how they arrived on foot or in a carriage, how they displayed their morbid ideas, how they wrote, and how they behaved. But withal the most chary record of physical disorders, the most elusive statements as to family or personal history—in brief, it was the study of mind apart from body—the psychological content. Having arrived at the conclusion that there is no pathology of insanity comment on somatic conditions was, of course, superfluous.

The blood of the insane is the *dernier cri* of the modern investigator. Dr. Lauder Lindsay, so long ago as 1854, published a series of observations on the histology of the blood of the insane, which he had made in the Crichton Royal Institution. He did not claim that his researches elucidated the morbid conditions of mind, or its organ, the brain; but rather illustrated the laws of pathology, the natural relations of healthy and morbid states of mind and body, and more particularly the reaction of physical diseases on mental phenomena. The *résumé* was presented under 14 headings, the fourth being to the effect that a leucocythæmic condition frequently exists. As examples of this, cases of general paralysis, acute mania, and melancholia are cited. Unfortunately, Dr. Lindsay concluded that there was no connexion between the state of the blood and the mental condition, but that it bore a relation to the physical disorder, debilitated conditions of the system, and general vitiation of the blood.

Thirty years elapsed before another systematic investigation of the blood of the insane was undertaken, when Dr. S. R. Macphail in 1884 won the medal of the Medico-Psychological Association. By that time the hæmocytometer and the hæmoglobinometer had been invented and with these instruments of precision further advance was recorded. In general paralysis Dr. Macphail recorded an increase in the relative proportion of white to red corpuscles, coincident with the progress of the disease; he failed to find any great influence on the proportion of white to red corpuscles in maniacal attacks, while in a series of recent admissions the proportion was increased. Most important is his conclusion that there is a close connexion between gain in weight, improvement in the quality of the blood, and mental recovery.

Another prize essay on the same subject was the work of Dr. Johnson Smyth in 1890. He inferred that the relative proportions of white to red corpuscles were so variable as to be of little importance. In many instances, however, he recorded an excess of leucocytes and stated that the blood of the insane is in a pathological condition.

Quite recently the position has been still further developed by the researches and conclusions of yesterday. Within the last few months Dr. L. C. Bruce has published his records of clinical investigations. Much of his book is concerned with observations on the blood of the insane, and specially on the leucocytosis which he has shown to be of definite importance in diagnosis and prognosis. What was dimly discerned by Dr. Lauder Lindsay half a century ago is made clear by Dr. Bruce to day, and especially the important conclusion that the morbid state of the blood is a dominating factor in the evolution of mental diseases. Sufficient has been said to indicate the growth of medical opinion relevant to insanity as an affair of medicine. Similar references might be made to other somatic conditions the true nature of which is only now intelligible and explicable. I have referred to Schroeder van der Kolk as one of the first to appreciate the toxic nature of insanity. He said: "It is evident that the brain, as the organ through which the higher intellectual powers are immediately manifested, must especially suffer in insanity. We should, however, be much in error in seeking the proper source and cause of the disease always in the brain, for the influence which many organs exercise upon the brain is evident enough." The Hippocratic doctrine that insanity is caused by disease had been obliterated by the superstition of the Middle Ages. The brain, as the organ of mind, infinitely complex in its own proper connexions, is at present the subject of study relative to its relations with all pathological somatic conditions. Thus the sympathetic insanity of van der Kolk is regarded as a toxic

[1] The lectures were illustrated by statistical tables, charts, and clinical observations.

affection, not always and inevitably caused by the direct continuity of nervous elements, but rather by a poisoned blood-supply and the newer view is the wider. The contributory causes of insanity are to be sought in heredity, in defect and decay of organisation, in the disordered working of the somatic mechanism, and specially in the toxic elements which may be formed by that disordered mechanism or introduced from without, which again brings the manifestations of cerebral disorder into line with other pathological somatic conditions and leaves the mystery of madness on a par with the mystery of rheumatism. For the position is that we have to deal with a constitutional disease, profoundly affecting metabolism, mainly originating in hereditary defect, and issuing in a liability to repeated attacks of insanity of a cyclical nature, quite different from those maladies which, like small-pox, appear to confer a future immunity.

From the medical point of view mind is not a separate entity, nor can we think of mental disorders as entities. The mind, normal or abnormal, is but one or rather one series of vital manifestations, part and parcel of the individual. The brain is the organ of mind but it is entirely dependent upon somatic agencies for nutrition, repair, rest, regeneration, and removal of noxious products—in short, for the normal manifestations of mind. These are elementary propositions which are constantly overshadowed by prepossessions which hinder us as the smoke of the conflagration obscures the origin of the fire. The psychic disorder is generalised, the somatic disorder is generalised, both are constitutional. Very rarely is insanity a local disease. Rather is it a generalised mental reduction, characterised by a loss of the finer feelings, and inability to adapt, a loss of restraint on motor manifestations; and the depth and continuance of this reduction, the severity and pathological importance of the organic concomitants are the measure of prognosis. All insanity is defect—at least, a degradation of function if not a degradation of structure. Insanity is a unity, not a fortuitous collection of kaleidoscopic symptoms each requiring a proper name. Still, one may conveniently speak of melancholia, mania, and dementia, meaning depression, excitement, and enfeeblement, and it is also permissible to use the term circular insanity and delusional insanity as denoting a pronounced mixed, alternating form, and a systematised delusional condition, neither of which is distinctly mania, melancholia, or dementia. In fact, this simple classification is founded upon symptoms in terms of time.

It is evident, however, that as our knowledge progresses we are enabled to screen off from the total numbers of insane persons certain persons affected by definite pathological forms. I shall therefore, following Sankey, further divide the cases under review into cases of ordinary insanity of obscure causation and cases of definite pathological causation. On the one hand, while I regard the pathological forms as of little moment in respect of prognosis under present conditions, as fixed, irrecoverable, and already doomed; on the other hand, I regard ordinary insanity as uncertain, curable, and now even hopeful. It may be that general paralysis is to be lifted out of the category of reproach, that it will be fought and conquered, as has been suggested by Dr. W. Ford Robertson. Dr. Bruce has lately shown that, disregarding the mental concomitants, there is evidence of the toxic nature of insanity. This evidence is of such a nature as to be appreciable by the methods of the clinic and the laboratory, to be checked or corroborated by the observers. It is not a theory of disease, but the direct outcome of a long, laborious, and skilful investigation into the facts of disease, honest and unprejudiced. His work opens up new vistas and affords new hopes. He has, finally, brought insanity into the category of other somatic diseases and established a parallel condition, long surmised and discovered with difficulty, long obscured, and at length distinguished by none other than the method of Zadig.

Briefly, it would appear that the time has already come when the conclusions formulated by Dr. Ford Robertson last year in reference to general paralysis, the failure of the organism to protect itself against bacterial invasion, may be extended to forms of ordinary insanity which hitherto have evaded the skill of the pathologist. Whether it is consequent on a metabolic toxæmia or on a bacterial invasion, insanity must now be regarded as a condition of disease which demands no special pathology and therefore no exceptional treatment. The numbers under consideration are 419 men and 390 women, being a total of 809 persons, admitted from 1880 to 1904 inclusive. Any study of insanity must begin with a consideration of heredity, the earliest conditions affecting the organism. The percentage of those with a hereditary history of insanity may be stated as 45, while the inclusion of the whole neuropathic heredity increases that number to 72. It is a narrow view of the heredity of insanity which does not include the occurrence of the graver neuroses, want of mental balance, eccentricity, alcoholism, and paralysis. These manifestations in one generation so frequently issue in pronounced insanity in the succeeding generation that the nature of the incidence is obvious. We have to deal with a condition which has certain hereditary relations owing to a defect of organisation and comparable with arterio-sclerosis, gout, or other diseases of obscure causation It is not the crude heredity of yesterday but a failure in development or a weakening of somatic defences apparent in early life, in the period of development, in the stress of maturity, or in the decay of old age. And I believe that the more marked the parental defect the earlier will the failure of the new organism be manifested exactly in conformity with the vital statistics of gout. We are so accustomed to think of somatic stigmata and congenital idiocy as inborn defects that it is easy to misinterpret the true nature of these failures. So far as I can see, the defect is of the same intrinsic nature, whether the mental disorder be manifested in early idiocy or delayed senility. There is no adequate reason to deny the existence of pre-natal toxin, assuming that toxins are effective in the production of cerebral disturbance and later insanity. By the hereditary nature of insanity I therefore mean the inborn defect which is manifested under certain conditions in the existence of the organism. Not, crudely, that fatuous and furious persons are so conceived, but that their defect of organisation is such as renders them liable to fatuous or furious manifestations throughout the course of their existence when subjected to certain morbid influences.

Heredity works out in two directions—for better or worse. We hear so much of the latter that the former is neglected or but partially recognised. Glib talk about the extinction of families and the eradication of undesirables must be balanced by the reasoned knowledge of natural processes. On the one hand, we can discern the ruin and decay of families in spite of the constant effort of nature at reconstruction and rehabilitation; on the other hand, by the prepotency of new blood and a more favourable environment there is a reversal of the process, a rehabilitation just as important and just as certain. Of course, this cannot be demonstrated by the statistics of asylums, and the official mind, "subdued to what it works in," is obsessed by the calamities and the degradation of human nature. It is just here that our statistical information generally fails, for the records of special hospitals must be replaced by the statistics of the general population taken at random, and deeply I regret that work of this importance is left to a few enthusiasts instead of being undertaken by the medical profession as a whole in furtherance of biological and sociological knowledge. This method of research does not apply merely to insanity but to all those constitutional disorders, to all those departures from the normal which are of the greatest national importance. Until a collective investigation of the kind is completed and analysed it is vain to attempt any final prognostic in heredity. If vital histories of families, with medical details of their normal and abnormal members, could be extracted from clinical records and reluctant memories to the number of some thousands, the inchoate condition of our opinions in reference to heredity would be reduced to order and some degree of precision.

It has been my practice so far as possible to construct graphic charts of each family under observation, and these have been submitted to Mr. David Heron, whose important study of the "Relation of Fertility in Man to Social Status" gained a wide and appreciative audience last year. Mr. Heron has kindly constructed a chart which shows the incidence of insanity in regard to individuals, one member of each family at least having been insane. It would appear that the incidence bears heaviest upon the eldest members of the families in fraternity, and that there is a fairly constant diminution of frequency as the families increase in size. I am not aware that this calculation has been made previously—in fact, the methods of applied mathematics and the working out of problems of probabilities in relation to biology are as yet in an early stage of development. The important biometric system advocated and instituted by Professor Karl

Pearson will greatly enlarge our knowledge and correct our prepossessions, if the desirable data are forthcoming. We only require a collection of accurate facts in sufficient numbers to correct the margin of error.

SOME OBSERVATIONS ON UTERINE FIBROIDS:

BASED ON A SERIES OF 150 CONSECUTIVE CASES TREATED BY ABDOMINAL OPERATION.[1]

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I.

WHEN discussing such a subject as uterine fibroids the greatest risk that one runs is that of becoming too discursive, because there are so many aspects of the subject that are full of interest and importance. In order to minimise this risk I propose to confine my remarks to a few points, as exemplified by cases that have come under my own observation, and upon whom I have had occasion to perform an abdominal operation. The text or basis of my paper is therefore a consecutive series of the first 150 cases so treated spread over a period of 11 years.

The points that I wish to consider are the following: 1. The age-incidence of fibroids. 2. The relation between fibroids and sterility. 3. Indications for operation as based upon (*a*) the symptoms produced; and (*b*) the complications to which fibroids are liable. 4. Methods of operation in relation to varieties of fibroids.

1. THE AGE-INCIDENCE OF FIBROIDS.

An examination of the ages of the patients at the time of operation gives the following results:—

Age.	Number of cases.	Age.	Number of cases.
Under 25 years	1	45-49 years	42
25-29 years	3	50-54 ,, ...	16
30-34 ,, ...	21	55-59 ,, ...	4
35-39 ,, ...	20	60 years or over	
40-44 ,, ...	41		

Or, expressed in decades:—

Age.	Number of cases.	Percentage.
Under 20 years	0	0·0
20-29 years	4	2·66
30-39 ,, ...	41	27·33
40-49 ,, ...	83	55·33
50-59 ,, ...	20	13·33
60 years or over	2	1·33
	150	100·0

These figures are in harmony with the general view that fibroids are almost unknown under 20 years and rare under 30 years; they are met with not infrequently between the ages of 30 and 40 years, and between 40 and 50 years they are relatively common. It must be noted that these figures do not express the age of onset of fibroids, because many of the patients had been the subjects of these tumours for years before they were operated upon; nor do they represent the relative ages of all patients suffering from fibroids; their more precise significance is the age at which the fibroids in my cases gave rise to such troubles as called for operation. The reason that the numbers rapidly diminish after the age of 50 years and drop almost suddenly after 60 years is that by this time the majority of patients have been operated upon nowadays, whilst some have died from the complications of fibroids, and some have been enabled, by the absence of complications or serious symptoms, or by putting up with a life of semi-invalidism, to retain their tumours undisturbed by the surgeon's knife. The youngest patient on this list was No. 11; she was 23 years old, and operation was necessitated by profuse hæmorrhage. The two oldest patients, Nos. 31 and 42, were aged 63 years, the one a single woman and the other a widow; both required operation on account of pressure symptoms, amounting, in the case of the latter, to partial intestinal obstruction.

I have examined my cases to see if there be any relation between the age of patients and the characters of their tumours and the results are set forth in the following table:—

Variety of tumour.	Under 30 years.	30-34 years.	35-39 years.	40-44 years.	45-49 years.	50-54 years.	55-59 years.	60 years and over.	Total.
Simple fibroids	1	4	7	12	13	7	2	0	46
Multiple fibroids	0	7	7	16	18	5	2	1	56
Cervix fibroids (solitary) ...	1	2	1	1	0	0	0	0	5
Subperitoneal fibroids* ...	0	6	3	1	2	1	0	0	13
Interstitial fibroids*	0	1	1	6	2	0	0	0	10
Submucous fibroids*	1	1	0	0	1	0	0	0	3
Soft red fibroid	1	0	1	0	1	0	0	0	3
Fibroids with cystic or necrobiotic degeneration	0	0	0	5	5	3	0	1	14
Totals	4	21	20	41	42	16	4	2	150

* Conditions allowing of myomectomy instead of hysterectomy.

We cannot lay great stress on this table because the numbers are too small, but it appears evident that the age of patients does not materially influence the character of the tumours, except in the matter of degenerative changes, which are strikingly absent before the age of 40 years. This, of course, is what we should expect from the life-history of fibroids.

2. THE RELATION BETWEEN FIBROIDS AND STERILITY.

It has long been known that there is a close association between sterility or arrested fertility and fibroids, and it occurred to me that it would be a matter of interest to endeavour to ascertain the precise nature of that association. It may be said briefly that the relation appears to be not between fibroids and *sterility*—i.e., incapacity to conceive—but between fibroids and the *absence of pregnancy*, whether the patient has had the opportunity of conceiving or not. I shall first state the facts at our disposal, derived from an analysis of these cases, and then make some rather speculative observations by way of inference. Of the 150 patients operated upon, 56 were single women and 94 were married. Of the 94 married women, 34 had never been pregnant and 60 had borne children. Thus the total number who had not been pregnant was 90, and our first deduction is that *in 60 per cent. of cases of fibroids the patient has not been pregnant.*

The length of time that the nulliparæ had been married was as follows, the time being not stated in my notes in 11 cases:—

Under 1 year	3 cases.	7 years... ...	1 case.	18 years... ...	1 case.
2 years	1 case.	9 ,, ...	1 ,,	20 ,, ...	1 ,,
3 ,, ...	2 cases.	12 ,, ...	1 ,,	24 ,, ...	1 ,,
4 ,, ...	2 ,,	13 ,, ...	2 cases	28 ,, ...	1 ,,
6 ,, ...	2 ,,	17 ,, ...	3 ,,	33 ,, ...	1 ,,

When we investigate the cases of women who had borne children we obtain some interesting and striking results. In the next table I have drawn up a list showing the number of pregnancies that each patient had had and the number of years that had elapsed since the last pregnancy. In my notes the data concerning the number of pregnancies are wanting in three cases, and the length of time since the last confinement in six cases.

Omitting the last three cases on the list, where the number of pregnancies was not known, 57 patients had had between them 172 pregnancies, giving an average of three pregnancies to each patient. Of these 172 no fewer than 38 had terminated in miscarriages. On glancing at the list one is struck by the relatively large number of patients who had had only one or two pregnancies—namely, 27 out of 57. Our second deduction is that *among married women fibroids are associated with diminished fertility*. But perhaps the most notable feature about this list is the long time, in the majority of cases, that had elapsed since the last pregnancy. Data are wanting on this point in six out of the 60 cases and of the remaining 54 three were pregnant when first seen;

[1] A paper read before the West Kent Medico-Chirurgical Society, Nov. 2nd, 1906.

in 7 cases the last pregnancy was less than 5 years previously; in 8 cases it took place from 5 to 9 years previously; in 13 cases from 10 to 14 years previously; in 11 cases from 15 to 19 years previously; and in 12 cases 20 years or more previously. Thus we find that 36 out of 54 cases, or 66·6 per cent., had not been pregnant for at least 10 years; that 23, or 41·5 per cent., had not been pregnant for 15 years; whilst the average lapse of time since the last pregnancy in the 54 cases was 12 years.

No. of case.	No. of pregnancies.	Time since last pregnancy.	No. of case.	No. of pregnancies.	Time since last pregnancy.
1	1	In labour.	31	3	15 years.
2	1	5 years.	32	3	18 ,,
3	1	8 ,,	33	3	19 ,,
4	1	9 ,,	34	4	11 ,,
5	1	10 ,,	35	4	12 ,,
6	1	10 ,,	36	4	13 ,,
7	1	11 ,,	37	4	15 ,,
8	1	16 ,,	38	4	27 ,,
9	1	17 ,,	39	4	28 ,,
10	1	18 ,,	40	5	13 ,,
11	1	20 ,,	41	5	15 ,,
12	1	22 ,,	42	6	5 weeks.
13	1	24 ,,	43	6	6 ,,
14	1	24 ,,	44	6	5 years.
15	1	25 ,,	45	6	5 ,,
16	2	Pregnant.	46	6	11 ,,
17	2	,,	47	6	18 ,,
18	2	9 months.	48	6	19 ,,
19	2	1½ years.	49	7	1 ,,
20	2	3 ,,	50	7	6 ,,
21	2	10 ,,	51	7	16 ,,
22	2	12 ,,	52	7	20 ,,
23	2	20 ,,	53	7	? ,,
24	2	20 ,,	54	8	11 ,,
25	2	22 ,,	55	9	2 ,,
26	2	28 ,,	56	10	? ,,
27	2	? ,,	57	11	10 ,,
28	3	7 ,,	58	?	? ,,
29	3	8½ ,,	59	?	? ,,
30	3	12 ,,	60	?	? ,,

We may sum up the results derived from the available data as follows. Among 150 cases, 56, or 37·3 per cent., were unmarried; 34, or 22·7 per cent., were married but had never been pregnant; 36, or 24·0 per cent., had not been pregnant for at least 10 years; 18, or 12·0 per cent., had been pregnant within 10 years; and 6, or 4·0 per cent., had been pregnant but the date of the last pregnancy was unknown. The remarkable final conclusion is that *in 84 per cent. of cases of fibroids the patient had either not been pregnant at all or had had no pregnancy for at least 10 years.*

What conclusions may we draw from these considerations? We might suppose that fibroids of the uterus lead to sterility, but I think that this supposition would be wrong because fibroids do not commonly appear before the age of 35 years, and patients have usually been married many years before they reach that age. The converse supposition would be that the absence of pregnancy predisposes to the occurrence of fibroids and it appears to me that there are grounds for thinking that this supposition is correct. I wish to emphasise the point that it is not sterility but the non-occurrence of pregnancy that is followed by the formation of fibroids. The nulliparæ on our list may perhaps be regarded as sterile, but we cannot predicate this of the single women because we cannot say whether, had they married, they would have borne children or not; and concerning the rest, at least 40 per cent. were not sterile because they had borne children. But this feature is possessed in common by the three groups, that the uterus had not been pregnant at all among the single women and nulliparæ and had not been pregnant, on the average, for the last 12 years in those who had had children.

It is a warrantable inference that fibroids arise in default of the normal function of the uterus—namely, pregnancy—and that the *modus operandi* may be that the periodic congestion of the uterus in preparation for this function expends itself, if continually thwarted, in pathological, irregular, and permanent, instead of physiological, uniform, and temporary, hypertrophy. After the menopause, when periodic congestion no longer occurs, the liability to the onset of fibroids ceases. The pathological revenge of defeated physiological purpose is not usually precipitate; from 20 to 30 years of grace are allowed for response to the physiological call. The uterus that could not become pregnant, through under-development or through deficient ovarian activity, is commonly exempt. The uterus that could have become pregnant, but has not done so, is the one that pays the penalty.

3. INDICATIONS FOR OPERATION.

These may be considered in relation to (*a*) the symptoms produced; and (*b*) the complications to which fibroids are liable.

(*a*) *The symptoms produced.*—I have investigated the symptoms of which my patients complained and have tabulated them below. In many cases the patient manifested two, three, or four leading symptoms. The list gives the different symptoms met with and the number of cases in which each symptom was present: hæmorrhage, 86 cases, in 33 of which it was described as "excessive"; abdominal pain, 65 cases; abdominal swelling, 50 cases, in 20 of which the patient complained of a "tumour"; pressure on the bladder, 41 cases, in 9 of which there was retention of urine; pressure on the bowel, 4 cases, in two of which there was more or less obstruction; general disablement or weakness, 14 cases, of which 10 had profound anæmia; pain in the back, 3 cases; dyspareunia, 2 cases; œdema of the legs, 1 case; vomiting, 1 case; abdominal tumour noticed during pregnancy, 2 cases; symptoms of miscarriage, 1 case; and dystocia, 1 case. All the above symptoms may be regarded as due directly to the tumour. There were other cases in which the tumours were more or less incidental to other conditions; for example, in nine cases the symptoms were those of retroversion, in one case there was prolapse of the uterus; one operation was undertaken primarily for appendicitis and the fibroids were discovered in the course of the operation and enucleated through the lateral incision; another operation was on account of an ovarian tumour and a myomectomy was done at the same time; lastly, one patient had an umbilical hernia and a radical cure of the hernia was combined with the hysterectomy.

It will be seen from the list that four symptoms stand out conspicuously as being frequently met with.

Hæmorrhage was present in 86 cases out of the 150, or 57 per cent., and some of these patients were exceedingly blanched and, indeed, almost exsanguined. The worst cases were, of course, those in which the tumours were intra-uterine or submucous.

Pain was present in 65, or 43 per cent. We must observe that pain is not a characteristic symptom of uncomplicated fibroids, and when it is present it denotes either mechanical pressure on surrounding organs or some complication such as diseased appendages or localised peritonitis leading to adhesions.

Abdominal swelling, sufficient to cause serious discomfort, was complained of in just one-third of the cases. This is not surprising when we realise that many of the tumours weighed from 7 to 12 pounds—that is, the weight of a good-sized leg of mutton; the largest tumour in my series weighed 17 pounds (Case 13).

Pressure symptoms.—Pressure on the bladder and urethra was present in 41 cases—that is, about 1 in 4; the effects produced varied from simple irritation, causing frequent micturition, to complete retention (in seven cases). Several patients gave the very characteristic history that the retention occurred at the time of the menstrual periods. The bowel commonly escapes the effects of pressure, unless the uterus is retroverted or an outlying tumour grows downwards into the pouch of Douglas or spreads out in the left broad ligament. In four cases there was pressure on the bowel, leading, in two cases, to partial obstruction. One would expect that in the case of cervix fibroids, which tend to fill up the pelvis and to form a cast of its cavity, pressure on the bowel would always occur; but the bowel appears to be able to hold its own in these cases, with the result that a cervix fibroid almost always presents a flattened area corresponding to the position of the bowel. In one case œdema of the legs appeared to be due to pressure on the iliac veins.

General disablement—that is, weakness, inability to walk or to work—was a marked feature complained of in 14 cases. In many of the other cases there was more or less disablement. In the case of one patient there were virtually no symptoms at all except some frequency of micturition. She married a medical man who discovered the tumour and brought her to me on the day after the marriage. As they were going to reside abroad they both desired that the tumour should be removed forthwith and this was done on the fourth day after marriage.

(*b*) *The complications to which fibroids are liable.*—Complications may affect the tumours, the uterus, the ovaries and tubes, or adjacent structures. That they are very frequent is shown by the fact that some complication was present in 94 out of 150 cases, or 62 per cent. I shall consider them in the order given.

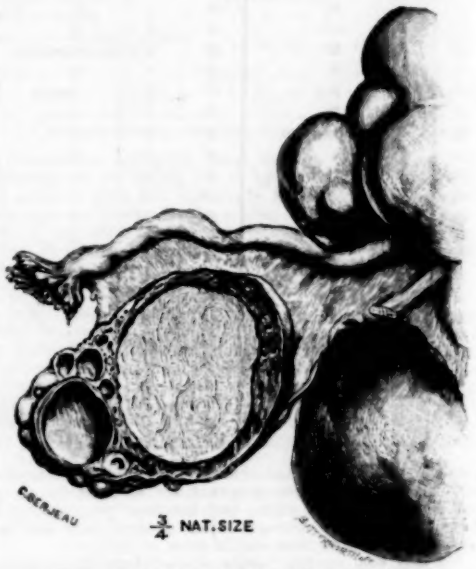
Tumours.—Uterine fibroids, like ovarian tumours, are liable to the accidents of impaction in the pelvis and torsion of the pedicle. Impaction may be brought about in three ways: in the first place, by a cervix fibroid, which must necessarily, in the course of its growth, fill up the true pelvis, since its position precludes it from rising into the abdomen. This occurs both with the typical solitary cervix fibroid, of which I had three instances, and also with multiple fibroids when one of them is cervical, of which there were four instances; but with a solitary cervix fibroid growing into the broad ligament, which was met with in two cases, it does not necessarily happen, because the broad ligament allows of expansion into the abdomen. Secondly, impaction may occur when a pedunculated fibroid falls into the true pelvis and continues to develop there. This occurred in three cases; in one of them it contracted adhesions and gave rise to dystocia. Thirdly, impaction results when a uterus which is the seat of fibroids becomes retroverted, and the tumour is large enough to fill the pelvis. Of this, there was one instance (Case 44), the tumour forming virtually a cast of the pelvis. The physical signs in such a case resemble retroversion of the gravid uterus at the third month, except that the mass is harder than it is in pregnancy, and there are corresponding bladder-troubles—namely, first frequency of micturition and then retention of urine. Twisting of the pedicle is necessarily a rare accident, because only few pedunculated fibroids have a pedicle small enough in proportion to their size to allow of rotation. It occurred in one case (No. 40).

FIG. 1.

A macerated calcified fibroid removed by vaginal myomectomy; natural size.

More important, because more frequent, are the secondary changes to which fibroid tumours are liable. They may undergo a myxomatous change, leading to the so-called fibrocystic tumour, of which there were seven examples. If such a tumour be submucous in position septic infection may occur. In other cases, numbering eight in our series, necrobiotic changes supervene, due, in all probability, to the partial cutting off of the blood-supply. When such a tumour is in the position of an intra-uterine polypus the uterus tends to expel it towards or into the vagina, and by compression of the pedicle the necrotic changes become accentuated, so that we have the "sloughing fibroid polypus." This condition was present in one case. Another change that takes place is the calcification of tumours. In one case (No. 45) a number of the tumours were more or less calcified. The extremes to which the process may go are well shown in the specimen I have here (Fig. 1); it did not occur in a case in this series, because it was removed by vaginal myomectomy. The case is referred to later, when speaking of this operation. The calcification was so complete that it was a matter of considerable time and labour to saw it across.

FIG. 2.



Fibroma of the ovary associated with uterine fibroids.

The uterus.—A fibroid uterus is liable to two important complications—namely, retroversion and pregnancy. Of retroversion we have 11 instances; in three of these the uterus was fixed by adhesions and one of them was the case of impaction previously referred to. Pregnancy complicated four of my cases. One (No. 8) was a case of cervical fibroid in the broad ligament, in which delivery by the natural passages would have become impossible. Another (No. 93) was a case of missed abortion. The third (No. 33) was the case of dystocia spoken of previously; the fibroid arose from the posterior wall of the uterus low down and was adherent in the hollow of the sacrum. The condition was not discovered until after labour had begun, because there had been no symptoms. When the labour made no progress her medical attendant turned the child and brought down a leg and then discovered the tumour. As it was evident that delivery by the natural way was impossible, the patient was sent into the hospital and a Cæsarean hysterectomy was performed. The fourth case (No. 39) was six months' pregnant when she was first seen and she had a good-sized sessile fibroid high up on the posterior wall of the uterus. It was thought that she could safely await her confinement without interference; labour came on prematurely, however, and a myomectomy was done six weeks later.

The ovaries and tubes.—These organs were diseased in 59 cases, or 40 per cent. It appears that the ovaries are rather prone to cystic degeneration in cases of fibroids, this condition accounting for 33 cases of which 12 had both ovaries and 21 had one ovary affected. That is, some ovarian cystic degeneration was present in 1 case in every 5. Ovarian tumours were present in 16 cases, as follows: Three patients

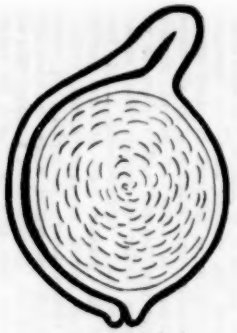


FIG. 3.

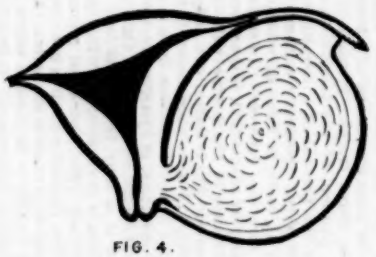


FIG. 4.

FIG. 5.

FIG. 6.

FIG. 7.

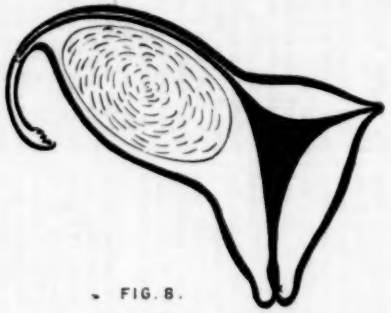


FIG. 8.

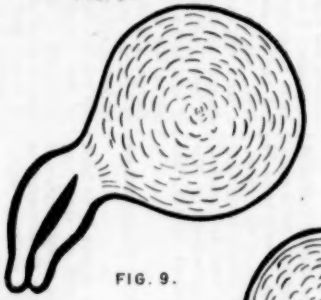


FIG. 9.

FIG. 10.

FIG. 11.

FIG. 12.

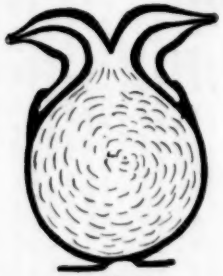


FIG. 13.

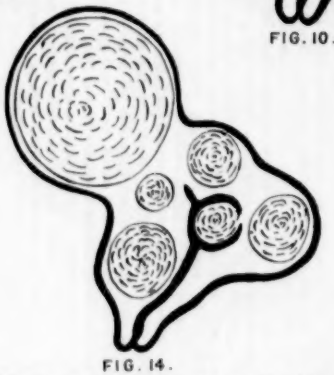


FIG. 14.

Fig. 3, Typical cervix fibroid, from Case 95. Fig. 4, Cervix fibroid growing into the left broad ligament, from Case 5. Fig. 5, Cervix fibroid growing downwards into the vagina, from a case of vaginal myomectomy. Fig. 6, Pedunculated subperitoneal fibroid with twisted pedicle and two interstitial fibroids, from Case 40. Fig. 7, Pedunculated subperitoneal fibroid under the uterine cornu, from Case 59. Fig. 8, Subperitoneal fibroid of the uterine cornu, from Case 52. Fig. 9, Pedunculated subperitoneal fibroid of the fundus, from Case 34. Fig. 10, Subperitoneal fibroid from the posterior wall of the uterus, from Case 54. Fig. 11, Subperitoneal fibroid of the fundus, from Case 63. Fig. 12, Submucous fibroid removed by hysterotomy, from Case 32. Fig. 13, Pedunculated submucous fibroid of the fundus, causing partial inversion, from a case of vaginal myomectomy. Fig. 14, Multiple uterine fibroids, from Case 26.

had dermoid cysts, and one of these had a multilocular ovarian and another had a hydrosalpinx on the other side. Four had a multilocular ovarian cyst on one side, one of whom had a hydrosalpinx on the other side; one (No. 144) had a large multilocular cyst on each side, complicated by dense adhesions. One (No. 102) had double ovarian papilloma; one had an ovarian fibroma (No. 47): this is shown in Fig. 2; one an ovarian sarcoma (No. 99) and she has since had recurrence in the cellular tissue on both sides of the pelvis. Two had ovarian carcinoma (Nos. 96 and 112); they have so far remained free from recurrence, although the second of them had secondary deposits both in the broad ligament and on the back of the uterus at the time of the operation. The specimen is among those shown. Three patients had cysts with intracystic hæmorrhage, and in one of these cases the cyst had a twisted pedicle. In seven cases there was double salpingitis. Hydrosalpinx of one side was present in one case besides the two previously mentioned, double hydrosalpinx in two cases, unilateral pyosalpinx with acute peritonitis in one case, which proved fatal.

Adjacent structures.—Under this heading may be included cases in which there was localised chronic peritonitis, leading to adhesions to surrounding organs. There were 15 of these, and in some of them the adhesions were very dense, involving the bowel and the bladder, and greatly increasing the operative difficulties. Lastly, there were independent complications in six cases—namely, carcinoma of the sigmoid (two), appendicitis (two), umbilical hernia, and recto-vaginal fistula.

4. METHODS OF OPERATION IN RELATION TO VARIETIES OF FIBROIDS.

Fibroids present such varieties that they require to be dealt with by different operative procedures, and we shall best appreciate these operations by first making a rapid review of the possible conditions met with. I have endeavoured to illustrate some of these by rough outline drawings representing the type of tumour in some of my cases.

Cervix fibroids.—This is a variety to which my colleague Mr. J. Bland-Sutton has drawn special attention; he finds that they occur in about 5 per cent. of cases. Three types are found. The first (Fig. 3) is that in which the fibroid develops in the supravaginal portion of the cervix and forms an ovoid tumour, on the top of which is perched a normal-sized uterine body. This was met with in Cases 41, 95, and 108. Sometimes such a tumour is found associated with other fibroids, as in Cases 45, 98, 109, and 136. The second type (Fig. 4) is one in which the tumour grows out into the broad ligament, remaining attached to the cervix by a pedicle. It corresponds to the subperitoneal fibroid that arises from the body of the uterus. Cases 5 and 8 presented this form of tumour. In the third type (Fig. 5) the fibroid grows downwards into the vagina; such a tumour is removed by vaginal myomectomy.

Fibroids of the body of the uterus are recognised as falling into three categories, the subperitoneal, the interstitial, and the submucous. Subperitoneal fibroids are shown in Figs. 6 to 11. They may have a very broad attachment, as in Figs. 10 and 11; a very narrow one, as in Fig. 6 (where the pedicle was twisted, Case 40); or the attachment may be intermediate in size. Such a tumour as that shown in Fig. 8 produces a remarkable distortion of the uterus. Interstitial fibroids are frequently small, as in Fig. 6; when they get large they tend to assume the subperitoneal or submucous position. Submucous fibroids are shown in Figs. 12 and 13; their tendency is to become polypoid, and the uterus then makes an effort to expel them, as occurred in the case represented in Fig. 13; so vigorous was the effort in this case that a partial inversion of the fundus resulted. Combinations of the three forms are not infrequent, and then we get such tumours as are shown in Fig. 14. Subperitoneal fibroids are specially prone to degenerative changes; submucous fibroids are the ones chiefly responsible for excessive hæmorrhages, and they are particularly liable to septic infection and to sloughing. Interstitial fibroids partake of the characteristics of the other two forms, and all three are apt to cause serious pressure-effects.

It is obvious that so many forms of tumour cannot all be dealt with in a uniform manner. Formerly the practice of removing the ovaries and leaving the tumour was in vogue; that was a time when the mortality of hysterectomy was considerable. I adopted it in three cases, Nos. 1, 2, and 4, but I have not done a case of this kind since early in 1898. The practice has now become obsolete, so I need not take up time in recapitulating its disadvantages. We have the choice of two routes in dealing with fibroids—namely, the vaginal and the abdominal.

The vaginal route has a limited usefulness. It is, of course, the only way of removing fibroids lying in the vagina, as in Figs. 5 and 13, and it is sometimes useful for the removal of small fibroids in the uterus. For this purpose the cervical canal is dilated and the tumour is removed entire or after cutting it into fragments (*morcellement*). Such procedures are known as vaginal myomectomy. Tumours as large as a golf-ball are often best removed by this method. When the tumour is larger I do not advocate this plan, as I think that it involves more risk and causes much more hæmorrhage than the procedure which I shall refer to as hysterotomy. Sometimes a small tumour imbedded within the wall of the uterus may be removed by vaginal enucleation; the mucosa and capsule over the tumour are incised and the tumour is shelled out. In one of my early cases some ten years ago I attempted this procedure, but found that the tumour was too large and firm to enucleate; I left it hoping that it would become extruded. As it happened this came about, but only after the patient had had an alarming rise of temperature extending over ten days. On the twelfth day a sloughing tumour of the size of a hen's egg came away and the patient got on all right. I should now deal with such a case by the abdominal route. In one case about two years ago a patient, 65 years of age, had a sloughing fibroid of the size of a fist, presenting at the os externum; there was a foul purulent discharge. The vagina was very narrow, from atrophy, and I had to face the problem whether to attempt a difficult vaginal myomectomy or to attack the tumour through the abdomen and run the risk of a septic peritonitis following. I decided on the former course. After dividing the cervix freely I attempted to cut up the tumour; but it was calcified and as hard as stone and I could make no impression on it. After an hour's hard work I managed to free it from its capsule; to deliver it I had to divide the posterior vaginal wall all the way down. The operation was completed by sewing up the vagina and cervix. This is the specimen shown in Fig. 1.

The abdominal route is the one required for the majority of cases. Here we have the choice of two procedures, the one conservative myomectomy, and the other radical hysterectomy. By myomectomy we mean the removal of a tumour from the uterus, leaving the uterus behind. It takes three forms, according to the position of the tumour. Subperitoneal myomectomy is the removal of a subperitoneal tumour; the uterus itself is left practically undisturbed. This plan was adopted in 11 cases, in three of which the appendages of one side were also removed. Interstitial myomectomy, or myomectomy by enucleation, is the removal of a fibroid from the substance of the uterine wall. An incision is made over the tumour, this is shelled out, and the incision is closed by sutures. 13 cases were treated in this fashion and in 11 of them a ventrofixation was done at the same time. Submucous myomectomy, or hysterotomy, means that the uterus is deliberately opened, as in a case of Cæsarean section; a tumour (instead of a baby) is removed from its cavity and the uterine incision is sewn up again. This plan was adopted in Cases 11, 32, and 106. Abdominal myomectomy is an ideal conservative procedure but it is not always applicable. It was employed in 27 cases in this series. It is chiefly adapted to solitary fibroids or to cases in which not more than two or three tumours are present. It is of little advantage in patients who are past the child-bearing age, and it is contra-indicated when an apparently single subperitoneal fibroid is associated with profuse hæmorrhage, because in such a case there is almost certainly a submucous fibroid present in addition. When the uterus is uniformly enlarged by a rounded tumour it is justifiable to split open the uterus and remove the tumour from the interior. Hysterectomy is the plan to be followed in cases where myomectomy is unsuitable, and especially in all cases of multiple fibroids and in cases of cervix fibroid. When both appendages are diseased and require to be removed, it is always better to remove the uterus than to do a myomectomy. Hysterectomy is of two kinds: in one case the greater part of the cervix is left behind; this is known as supravaginal hysterectomy or subtotal hysterectomy. In my list of cases this operation is always understood when "abdominal hysterectomy" is spoken of. In most cases I regard this as the best procedure, and this view is shared by many

experienced operators. In some cases, however, and especially when the cervix is the seat of tumours or raises suspicions of malignancy, it is better to remove the whole uterus, including the cervix. This operation is known as total hysterectomy or panhysterectomy.

In this series a hysterectomy was done 120 times—namely, subtotal hysterectomy in 109 cases and total hysterectomy in 11. In many cases the appendages had to be removed also, the exact operations and the number of each performed being as follows:—

Oöphorectomy		3
Abdominal myomectomy—		
Subperitoneal	11	
Interstitial	13	
Submucous	3	27
Abdominal hysterectomy—		
Both appendages left	33	
Appendages of one side removed ...	41	
Appendages of both sides removed ...	35	109
Panhysterectomy—		
Both appendages left	4	
Appendages of one side removed ...	3	
Appendages of both sides removed ...	4	11
		150

CONCLUSION.

I have reviewed at some length the somewhat formidable list of disabling symptoms and organic complications that follow in the train of fibroids, and if I have incurred the risk of taxing the reader's patience therewith my excuse must be that such a course was necessary in order to demonstrate that these tumours are by no means so innocent and harmless as they have been represented to be. When I began practice I was disposed to regard fibroids with leniency, but a closer acquaintance with them has led me to regard them as dangerous to life and seriously inimical to health and usefulness, and I feel that this position is justified by the facts which I have placed on record. I do not claim that there is anything original in my point of view, for nearly all those who have had an operative acquaintance with fibroids have come to the same conclusion. I am not engaged in slaying an obsolete idea, for even in this progressive day the venerable tradition that fibroids are comparatively harmless possessions is endowed with a considerable, though diminishing, vitality. I have no quarrel with venerable traditions as such, but when they become mischievous they require to be extinguished—mercifully, if possible, but in any case extinguished. There was a time when this same tradition, which is now mischievous, was actually beneficent—a time, namely, when operations for the removal of fibroids were attended by such a high rate of mortality that the cure was even more dangerous than the disease. Then it was wise to teach that they should be generally left alone. As operative results improved, the tradition, instead of being actively beneficent, became merely innocuous; but with further progress of such a sort that patients can be restored to health and usefulness with greatly diminished risk, it is a cruelty to condemn them to suffer on the strength of a tradition which is directly contrary to fact. To-day the risks of operations for fibroids arise chiefly out of serious complications, and if we act upon the principle of removing fibroids as soon as they give trouble, without waiting until the onset of dangerous complications, the operative mortality will fall as low as that of ovariotomy. I am solemnly convinced that the interests of our patients demand the general acceptance of this principle, and that with the inexorability of fate the principle will be accepted sooner or later, whether we help it or hinder. Therefore, regardless of possible charges of *furor operativus* or *cacoethes operandi*, I invite the medical profession to approve the principle and to combat the tradition.

LIST OF CASES.

In the following list the particulars of each case are stated in the following order:—Consecutive number; patient's initials, age, and civil state; place of operation (C.H.W.=Chelsea Hospital for Women; T.H.=Tottenham Hospital; P.=private case); date of operation; condition at the time of operation; particulars of operation; result (R.=recovery, D.=death); remarks, if any.

1.—C.W., 45, W.; C.H.W.; 1896, Sept. 1th; uterine fibroids; double oöphorectomy; R.

2.—G.R., 31, S.; C.H.W.; 1896, Oct. 2nd; uterine fibroid; double oöphorectomy; R.

3.—M.C., 30, S.; C.H.W.; 1897, July 22nd; multiple uterine fibroids; abdominal hysterectomy and removal of the right appendages; R.

4.—A C., 43, M.; C.H.W.; 1898, April 18th; uterine fibroid, left ovarian dermoid, right hydrosalpinx; double ovariotomy; R.

5.—E.H., 29, M.; C.H.W.; Sept. 2nd; broad ligament fibroid, arising from the cervix; abdominal hysterectomy, removal of left appendages; R.

6.—E.C., 46, S.; C.H.W.; Sept. 26th; uterine fibroid; abdominal hysterectomy, removal of left appendages; R.

7.—L.T., 40, S.; C.H.W.; Dec. 12th; multiple uterine fibroids; abdominal hysterectomy; R.

8.—C.J., 35, M.; C.H.W.; Dr. G. W. F. Macnaughton; 1899, Oct. 30th; broad ligament fibroid arising from the cervix, pregnancy 4½ months; (*a*) abdominal myomectomy, secondary hæmorrhage; (*b*) reopening, abdominal hysterectomy; D., pneumonia third day.

9.—R.V., 46, M.; P.; Dr. A. S. Gubb; Nov. 3rd; uterine fibroid, umbilical hernia; abdominal hysterectomy, radical cure of hernia; R.

10.—A.R., 40, S.; T.H.; 1900, August 14th; large pedunculated uterine fibroid; abdominal myomectomy; subsequent hysterectomy in May, 1906. (See No. 132.)

11.—M.H., 23, S.; P.; Dr. P. R. Dodwell; August 31st; intra-uterine fibroid; abdominal myomectomy by hysterotomy; R. Case reported in London Obstetrical Transactions for 1900.

12.—R.G., 35, S.; C.H.W.; Sept. 10th; uterine fibroid, left ovarian cyst, right ovarian dermoid; abdominal hysterectomy, double ovariotomy; R.

13.—E.S., 47, S.; C.H.W.; Sept. 17th; large uterine fibroids (17 pounds), both ovaries cystic and flattened by tumour; abdominal hysterectomy, double ovariotomy; R.

14.—S.S., 30, M.; C.H.W.; Sept. 17th; uterine fibroid; abdominal hysterectomy; R.

15.—F.H., 45, M.; C.H.W.; Sept. 24th; uterine fibroid; abdominal hysterectomy; R.

16.—M S., 48, M.; T.H.; Dr. R. B. Marjoribanks; 1901, Jan. 15th; multiple uterine fibroids, diseased appendages; abdominal hysterectomy, both appendages removed; R.

17.—M D., 51, S.; T.H.; March; multiple uterine fibroids; diseased appendages; abdominal hysterectomy; both appendages removed; R.

18.—L I., 51, M.; C.H.W.; April 1st; uterine fibroid, right hydrosalpinx; abdominal hysterectomy; both appendages removed; R.

19.—B.N., 56, M.; T.H.; April 23rd; uterine fibroid; abdominal hysterectomy; D.

20.—C.H., 32, M.; C.H.W.; June 10th; uterine fibroid; abdominal hysterectomy; R.

21.—S.B., 36, M.; P.; Dr. J. W. MacVine; June 21st; uterine fibroid; abdominal hysterectomy; R.

22.—M.S., 36, M.; T.H.; June 24th; interstitial fibroids, in fixed retroverted uterus; abdominal myomectomy by enucleation, ventrofixation; R.

23.—R.R., 43, M.; T.H.; July 2nd; large uterine fibroids; ovaries both cystic; abdominal hysterectomy; double ovariotomy; R.

24.—L.C., 40, S.; T.H.; August 6th; uterine fibroid; abdominal hysterectomy; R.

25.—A.H., 46, M.; T.H.; Dr. C. E. Hutt; Oct. 24th; interstitial fibroid in fixed retroverted uterus; abdominal myomectomy by enucleation, ventrofixation; R.

26.—E.H., 33, M.; T.H.; Dr. C. H. Adamson; Oct. 24th; large uterine fibroid attached to fundus, several interstitial fibroids, adhesion of bladder on left side of fundus; abdominal hysterectomy, right ovariotomy; R.

27.—E.W., 52, M.; C.H.W.; Nov. 24th; uterine fibroid impacted and adherent in pelvis, right ovarian dermoid; abdominal hysterectomy, right ovariotomy; R.

28.—E.C., 53, S.; T.H.; Nov. 28th; uterine fibroid, right ovarian blood cyst; abdominal hysterectomy, removal of right appendages; R.

29.—E.E., 53, S.; T.H.; Dec. 17th; uterine fibroid in a uterus septus; abdominal hysterectomy; removal of right appendages; R.

30.—A.B., 46, M.; T.H.; Dr. J. W. MacVine; 1902, Feb. 13th, uterine fibroid, right ovary cystic; abdominal hysterectomy, removal of right appendages; R.

31.—L.L., 63, S.; T.H.; Dr. R. B. Marjoribanks; Feb 20th; pedunculated cystic uterine fibroid, right cornu; three smaller fibroids; abdominal myomectomy; R.

32.—P.T., 31, M.; T.H.; Dr. David Petty; April 10th; intra-uterine fibroid of size of fist; abdominal myomectomy by hysterotomy; R.

33.—T.H., 31, M.; T.H.; Dr. C. E. Hutt; April 17th; large uterine fibroid obstructing labour at full term; Cæsarean hysterectomy, removal of right appendages; R.

34.—A.S., 41, S.; T.H.; Dr. J. Thoresby Jones; May 22nd; large degenerating cystic fibroid, attached to anterior wall of uterus; abdominal myomectomy; R.

35.—E.S., 47, M.; T.H.; Dr. C. E. Hutt; May 22nd; multiple uterine fibroids; abdominal hysterectomy; removal of left appendages; R.

36.—R.H., 32, M.; C.H.W.; Dr. J. B. Wallace; June 16th; multiple uterine fibroids, right ovary cystic; abdominal hysterectomy, removal of right appendages; R.

37.—S.M., 47, S.; T.H.; Dr. Horace R. Wilson, June 19th; multiple uterine fibroids; abdominal hysterectomy; R.

38.—L.S., 51, M.; T.H.; August 28th; multiple large uterine fibroids; both ovaries cystic; abdominal hysterectomy removal of both appendages; R.

39.—M.C., 39, M.; T.H.; Dr. F. P. Elliott; Sept. 4th; sessile subperitoneal fibroid, posterior surface of uterus; myomectomy by enucleation; R.

40.—H.G., 49; S.; C.H.W.; Dr. A. Irby Webster; Sept. 8th; multiple uterine fibroids, a large pedunculated fibroid of the fundus with twisted pedicle; abdominal hysterectomy, removal of both appendages; R.

41.—M E., 43, M.; C.H.W.; Dr. A. H. Hoffman; Sept. 8th; cervical fibroid of size of large fist, in supravaginal portion; abdominal hysterectomy; R.

42.—E.D., 63, W.; T.H.; Dr. C. R. Salisbury; Sept. 11th; multiple uterine fibroids; abdominal hysterectomy; removal of right appendages; R.

43.—E T., 22, M.; T.H.; Sept. 11th; multiple uterine fibroids; abdominal hysterectomy; removal of right appendages; R.

44. E.A., 43, W.; C.H.W.; Dr. J. M. Ehrhardt; Sept. 29th; uterine fibroid, retroverted and forming cast of pelvis; abdominal hysterectomy; R.

45.—L.C., 53, S.; T.H.; Dr. J. Cater; Oct. 9th; multiple calcified uterine fibroids, one fibroid situated low in posterior wall of cervix; abdominal hysterectomy; D.

46.—M.R., 30, M.; P.; Dr. H. K. Ramsden; Oct. 12th; two sessile fibroids on posterior wall of fundus; uterus retroverted and fixed; abdominal myomectomy by enucleation, ventrofixation; R.

47.—E.H., 30, M.; T.H.; Dr. Hugh Silver; Oct. 16th; multiple

uterine fibroids, fibroma of right ovary; abdominal hysterectomy, right ovariotomy; R. Case reported in London Obstetrical Transactions for 1902.

48.—A.N., 47, M.; C.H.W.; 1903, Jan. 5th; multiple uterine fibroids; bdominal hysterectomy; R.

49.—C.B., 45, M.; C.H.W.; Dr. S. E. Tench; Jan. 5th; multiple fibroids in retroverted uterus; abdominal myomectomy by enucleation, ventrofixation; R.

50.—A.C., 37, S.; T.H.; Dr. W. Henry White; Feb. 5th; large uterine fibroid, ovaries both cystic; abdominal hysterectomy, both appendages removed; R.

51.—K.G., 46, M.; P.; Dr. J. W. MacVine; Feb. 18th; uterine fibroid; abdominal hysterectomy; R.

52.—L.P., 35, M.; T.H.; Dr. A. W. Bowie; Feb. 25th; uterine fibroid; abdominal hysterectomy, right appendages removed; R.

53.—M.L., 40, M.; P.; March 13th; fibroid in anterior wall of uterus, small fibroid posteriorly, retroversion, chronic appendicitis; abdominal myomectomy by enucleation, ventrofixation, removal of vermiform appendix; R.

54.—C.L., 44, S.; T.H.; Dr. G. P. Chappel; March 19th; uterine fibroid in posterior wall of uterus; abdominal hysterectomy; R.

55.—L.W., 32, S.; T.H.; April 2nd; uterine fibroid, cystic left ovary; abdominal hysterectomy, left ovariotomy; R.

56.—A.B., 47, M.; T.H.; April 23rd; uterine fibroid; abdominal panhysterectomy; R.

57.—A.W., 51, S.; P.; Dr. L. P. Scott; May 6th; very large uterine fibroid; abdominal hysterectomy; D.

58.—E.S., 43, W.; T.H.; May 14th; uterine fibroids, cystic left ovary; abdominal hysterectomy, left ovariotomy; R.

59.—H.T., 34, S.; T.H.; Dr. S. E. Tench; May 14th; elongated subperitoneal fibroid from right cornu of uterus; abdominal myomectomy; R.

60.—M.R., 47, M.; T.H.; Dr. F. J. Tresilian; May 21st; subperitoneal fibroid in right anterior cornu, cystic left ovary; abdominal myomectomy, left ovariotomy; R.

61.—A.W., 43, S.; T.H.; Dr. G. P. Chappel; May 28th; multiple fibroids, large fibroid dissecting up bladder and reaching low in the pelvis, a fibroid behind adherent with cystic ovary to a mass (carcinoma) in the sigmoid; abdominal hysterectomy, left ovariotomy; R.

62.—E.S., 42, M.; P.; Dr. George Bower; August 24th; uterine fibroids; abdominal hysterectomy; R.

63.—J.O., 47, S.; C.H.W.; Sept. 14th; uterine fibroids, left ovary adherent to sigmoid; abdominal hysterectomy, removal of right appendages; R.

64.—P.T., 42, S.; T.H.; Sept. 17th; multiple fibroids; abdominal hysterectomy; removal of left appendages; R.

65.—S.P., 47, M.; T.H.; Dr. C. Lawson Smith; Sept. 17th; fibroid in anterior wall of uterus; abdominal myomectomy by enucleation, ventrofixation; R. (uterine cavity opened; cervical canal stretched with forceps).

66.—H.W., 49, M.; T.H.; Oct. 8th; fibroid in anterior wall of uterus; abdominal myomectomy by enucleation, ventrofixation; R. (uterine cavity opened and curetted; cervical canal stretched).

67.—S.S., 43, S.; P.; Dr. W. Murray Leslie; Oct. 18th; fibroid in anterior wall of uterus, retroversion; abdominal myomectomy by enucleation, ventrofixation; D.

68.—T.P., 45, S.; T.H.; Dr. C. Lawson Smith; Oct. 29th; multiple uterine fibroids; abdominal panhysterectomy; R.

69.—G.C., 33, S.; P.; Dr. C. J. Martin; Nov. 15th; subperitoneal fibroid, retroversion, chronic appendicitis; abdominal myomectomy; suspension of uterus by right round ligament; removal of vermiform appendix; R. (operation performed primarily for appendicitis, procedures carried out through right iliac incision).

70.—D.S., 42, M.; T.H.; Nov. 19th; interstitial fibroid, retroversion; abdominal myomectomy by enucleation, ventrofixation; R.

71.—A.C., 46, M.; T.H.; Dr. J. W. MacVine; Nov. 19th; uterine fibroid, double adherent hydrosalpinx; abdominal hysterectomy; both appendages removed; R.

72.—E.G., 28, S.; C.H.W.; Dr. E. Gordon Hull; Nov. 30th; uterine fibroid, left ovary cystic; abdominal hysterectomy, removal of left appendages; R.

73.—F.B., 41, M.; C.H.W.; Dec. 7th; uterine fibroid, left ovary cystic; abdominal hysterectomy, removal of left appendages; R.

74.—E.P., 54, M.; C.H.W.; Dec. 14th; uterine fibroid; abdominal hysterectomy, removal of both appendages; D.

75.—M.S., 43, M.; T.H.; Jan. 14th, 1904; multiple uterine fibroids; abdominal panhysterectomy, removal of both appendages; R.

76.—E.G., 52, M.; P.; Dr. H. J. Thornton; Jan. 31st; subperitoneal and interstitial fibroids, retroversion; abdominal myomectomy and enucleation, ventrofixation; R.

77.—A.H., 50, M.; T.H.; Dr. W. B. Benjafield; Feb. 4th; uterine fibroid, cystic right ovary; abdominal hysterectomy, right ovariotomy; R.

78.—M.B., 43, M.; T.H.; Dr. A. W. Bowie; March 3rd; uterine fibroid; abdominal hysterectomy, removal of both appendages; R.

79.—A.N., 40, M.; T.H.; Dr. H. Alexander; March 10th; softening uterine fibroid, cystic ovaries; abdominal hysterectomy, double ovariotomy; R.

80.—E.H., 45, W.; T.H.; Dr. F. J. Tresilian; April 7th; softening uterine fibroid; abdominal hysterectomy, removal of left appendages; R.

81.—E.N., 57, M.; T.H.; April 21st; uterine fibroid; abdominal hysterectomy; R.

82.—A.L., 44, W.; T.H.; Dr. Tresilian; April 21st; large uterine fibroid with enormous pedunculated fibroid, large and dense intestinal adhesions; abdominal hysterectomy; D.

83.—H.B., 47, M.; T.H.; Dr. C. E. Hutt; April 21st; very large uterine fibroid, large left pyosalpinx, acute peritonitis; abdominal hysterectomy, removal of both appendages; D.

84.—E.S., 41, M.; C.H.W.; Dr. A. G. T. Hanks; May 30th; uterine fibroid; abdominal hysterectomy, removal of right appendages; R.

85.—S.A., 40, S.; P.; Dr. W. R. Murison; July 5th; large degenerating uterine fibroid; abdominal hysterectomy; R.

86.—H.B., 49, M.; P.; Dr. H. Lloyd Patch; July 17th; large red soft fibroid; abdominal hysterectomy, removal of both appendages; R

87.—A.P., 41, M.; C.H.W.; Dr. R. L. Grosvenor; Sept. 19th; uterine fibroid with commencing degeneration; abdominal hysterectomy, removal of both appendages; R.

88.—A.L., 45, S.; T.H.; Dr. J. Thomarson; Nov. 10th; uterine fibroids, right ovarian blood cyst with twisted pedicle; abdominal hysterectomy, removal of both appendages; R.

89.—S.B., 36, M.; T.H.; Dr. T. Gurney; Dec. 8th; uterine fibroid, both ovaries cystic; abdominal hysterectomy, removal of both appendages; R.

90.—E.M., 46, M.; T.H.; Dr. David Petty; 1905, Jan. 26th; uterine fibroid; abdominal hysterectomy, removal of both appendages; R.

91.—E.B., 32, S.; P.; Dr. George Bower; Jan. 27th; uterine fibroid; abdominal hysterectomy, removal of both appendages; R.

92.—M.S., 41, S.; C.H.W.; Feb. 20th; uterine fibroid; abdominal hysterectomy; R.

93.—B.P., 37, M.; P.; Dr. M. G. Biggs; March 9th; uterine fibroid, with pregnancy, arrested at two and a half months; abdominal hysterectomy; R.

94.—W., 35, S.; P.; Dr. F. J. Tresilian; March 26th; multiple fibroids; abdominal hysterectomy; R.

95.—L.W., 34, S.; C.H.W.; Dr. J. Angell James; April 3rd; large cervix fibroid; abdominal panhysterectomy, removal of right appendages; R.

96.—E.B., 38, S.; C.H.W.; Dr. S. R. Schofield; April 10th; uterine fibroids, left ovarian carcinoma, right ovary healthy; abdominal hysterectomy, double ovariotomy; R.

97.—C.P., 53, M.; C.H.W.; April 10th; multiple uterine fibroids, left ovarian cyst, ? malignant; abdominal hysterectomy, removal of both appendages; R.

98.—K.K., 43, S.; C.H.W.; April 24th; uterine fibroids with cervix fibroid; abdominal hysterectomy, removal of both appendages; R.

99.—S.S., 40, S.; P.; May 1st; uterine fibroids, left ovarian sarcoma; abdominal hysterectomy, removal of both appendages; R.

100.—M.B., 49, M.; T.H., May 4th; large uterine fibroid; abdominal hysterectomy, removal of both appendages; R.

101.—M.P., 43, M.; C.H.W.; Dr. Hugh Silver; May 8th; small fibroid in anterior uterine wall, retroversion; abdominal myomectomy by enucleation, ventrofixation; R.

102.—E.B., 51, M.; T.H.; Dr. David Petty; May 18th; large uterine cystic fibroid, double papillomatous ovarian cysts; abdominal hysterectomy, double ovariotomy; R.

103.—V.M., 30, M.; May 25th; multinodular subperitoneal fibroid from right cornu of uterus; abdominal myomectomy; R.

104.—A., 50, M.; P.; Dr A. A. Napper; June 2nd; uterine fibroids, both ovaries cystic; abdominal hysterectomy, double ovariotomy; R.

105.—A.C., 50, M.; P.; Dr. F. J. Tresilian; August 26th; uterine fibroids, large one fibrocystic, right ovary cystic; abdominal hysterectomy, right ovariotomy; R.

106.—A.M., 37, S.; T.H.; Dr. R. Marston Bruce; Sept. 7th; fibroid of size of fist in the uterus, especially anterior wall; abdominal myomectomy by hysterotomy; R.

107.—A.N., 47, M.; T.H.; Dr. A. W. Bowie; Sept. 14th; uterine fibroids, sloughing fibroid polypus; abdominal hysterectomy; R.

108.—S., 33, M.; P.; Dr. W. H. Slimon; Sept. 23rd; very large cervix fibroid, double salpingitis with occlusion of ostia; abdominal panhysterectomy, removal of both appendages; R.

109.—L.H., 53, M.; T.H.; Dr. W. G. Fee; Sept. 28th; multiple uterine fibroids, including a cervix fibroid, recto-vaginal fistula; abdominal hysterectomy, right appendages removed; R.

110.—E.B., 38, S.; C.H.W.; Oct. 2nd; uterine fibroid, both ovaries cystic; abdominal hysterectomy, removal of both appendages; R.

111.—J.M., 40, M.; T.H.; Oct. 5th; uterine fibroid, right salpingitis; abdominal hysterectomy; removal of right appendages; R.

112.—F.G., 37, S.; P.; Dr. Kenneth Frazer, Oct. 6th; uterine fibroids, right suppurating ovarian cyst, with carcinoma, metastatic deposits back of uterus and right broad ligament; abdominal hysterectomy, double ovariotomy; R.

113.—G.R., 45, M.; T.H.; Dr. W. Love; Nov. 2nd; uterine fibroids; abdominal hysterectomy; R.

114.—A.T., 45, M.; T.H.; Nov. 23rd; multiple uterine fibroids, cystic left ovary; abdominal hysterectomy, left ovariotomy; R.

115.—A.S., 43, S.; P.; Dr. P. R. Dodwell; Nov. 25th; two interstitial fibroids; large ovarian cyst; abdominal myomectomy by enucleation, ovariotomy, ventrofixation; R.

116.—E.M., 41, S.; T.H.; Dr. R. Murray Leslie; Dec. 14th; multiple uterine fibroids, cystic right ovary; abdominal hysterectomy, right ovariotomy; R.

117.—E.L., 44, M.; C.H.W.; Dec. 18th; uterine fibroid (with two patches of cystic degeneration), cystic right ovary; abdominal hysterectomy, right ovariotomy; R.

118.—G.B., 28, M.; C.H.W.; Dr. J. M. Barlet; Dec. 18th; soft red uterine fibroid; abdominal hysterectomy; R.

119.—M.S., 40, W.; C.H.W.; Dr. Williams and Mr. J. Howell Evans; 1906, Jan. 8th; uterine fibroids, cystic right ovary; abdominal hysterectomy, right ovariotomy; R.

120.—H.H., 49, S.; T.H.; Dr. A. Ogier Ward; Jan. 11th; multiple fibroids; cystic left ovary; abdominal hysterectomy, left ovariotomy; D.

121.—G.D., 46, M.; C.H.W.; Dr. S. R. Schofield; Feb. 19th; uterine fibroids, cystic right ovary; abdominal hysterectomy, double ovariotomy; R.

122.—A.H., 45, M.; C.H.W.; Dr. J. Angell James; Feb. 19th; uterine fibroids, both ovaries cystic; abdominal hysterectomy, double ovariotomy; R.

123.—A.P., 36, S.; T.H.; Dr. J. W. Hunt; March 15th; uterine fibroid, both ovaries cystic; abdominal panhysterectomy, double ovariotomy; R.

124.—M.H., 48, M., P.; Dr. A. Robin; March 24th; uterine fibroids, both ovaries closely adherent to broad ligaments; abdominal hysterectomy; R.

125.—S.R., 47, M.; T.H.; Dr. G. Greenwood; March 29th; multiple fibroids, double hydrosalpinx; abdominal hysterectomy, removal of both appendages; R.

126.—J.B., 35, S.; P.; Mr. A. S. Morley; March 30th; multiple uterine fibroids; abdominal hysterectomy; R.

127.—A.B., 42, M.; C.H.W.; Dr. Mark Robinson; April 9th; pedunculated fibroid in right broad ligament; blood-cyst in right ovary; abdominal myomectomy, right ovariotomy; R.

128.—K.B., 48, S.; P.; Dr. J. W. Hunt; April 19th; large softening fibroid in anterior uterine wall; both ovaries cystic; abdominal hysterectomy, double ovariotomy; R.

129.—A.H., 47, M.; C.H.W.; Dr. H. M. Murray; April 23rd; large

pedunculated fibroid from left uterine cornu, double salpingitis; abdominal myomectomy, removal of right tube; R.

130.—E.B., 49, S.; T.H.; Dr. H. E. Powell; April 26th; uterine fibroid, cystic and adherent left ovary; prolapse of rectum; abdominal hysterectomy, left ovariotomy, suspension of rectum to sacrum; R.

131.—J.S., 36, M.; C.H.W.; May 7th; uterine fibroids, small left ovarian cyst, dense bowel adhesions; abdominal hysterectomy, left ovariotomy; R.

132.—A.R., 44, S.; C.H.W.; May 7th; uterine fibroids, cystic left ovary, bowel adhesions; abdominal hysterectomy, left ovariotomy; R. Previous myomectomy, see No. 10.

133.—R.W., 44, M.; T.H.; Dr. F. J. Tresilian; May 17th; uterine fibroids with adhesions; abdominal panhysterectomy, removal of right appendages; R.

134.—A.H., 46, W.; C.H.W.; May 21st; uterine fibroids with bowel adhesions, diseased appendages; abdominal hysterectomy, removal of both appendages; R.

135.—I.C., 43, M.; C.H.W.; Dr. T. N. Kelynack and Dr. Clements; May 28th; uterine fibroid; abdominal hysterectomy; R.

136.—J.B., 42, M.; Dr. Townsend Barker; June 11th; uterine fibroids with cervix fibroid; abdominal panhysterectomy, removal of left appendages; R.

137.—M.L., 49, S.; T.H.; Dr. G. Angus Hunt; June 14th; uterine fibroids, right cystic ovary; abdominal hysterectomy, both appendages removed; R.

138.—M.P., 41, S.; C.H.W.; Dr. Thomas and Dr. Garvin; June 18th; uterine fibroids, right ovarian cyst, left hydrosalpinx; abdominal hysterectomy, removal of both appendages; R.

139.—L.H., 32, M.; T.H.; Dr. Moore; June 28th; subperitoneal fibroid; abdominal myomectomy; R.

140.—M.H., 45, S.; C.H.W.; Dr. W. W. Don; July 2nd; multiple fibroids; abdominal panhysterectomy; R.

141.—J.B., 50, M.; C.H.W.; July 2nd; uterine fibroids, both ovaries cystic; abdominal hysterectomy, double ovariotomy; R.

142.—J.S., 44, M.; T.H.; July 5th; uterine fibroid; abdominal hysterectomy; R.

143.—E.H., 33, S.; T.H.; Dr. L. P. Scott; August 2nd; uterine fibroids, cystic left ovary; abdominal hysterectomy, left ovariotomy; R.

144.—A.C., 38, S.; T.H.; Dr. David Petty; August 2nd; large uterine fibroids, double ovarian cyst, dense adhesions; abdominal panhysterectomy, double ovariotomy; R.

145.—M.R., 37, M.; C.H.W.; Oct. 1st; large red degenerating subperitoneal fibroid, dense bowel adhesions; abdominal myomectomy; R. Previous operation for right extra-uterine pregnancy.

146.—L.L., 35, M.; P.; Dr. W. Henry White; Oct. 12th; uterine fibroid; abdominal hysterectomy; R.

147.—S.T., 47, S.; T.H.; Dr. A. de Prenderville; Oct. 12th; uterine fibroids, cystic right ovary; abdominal hysterectomy, right ovariotomy; R.

148.—C.W., 57, M.; T.H.; Dr. R. Lyon; Oct. 18th; uterine fibroids, fundal fibroid adherent to abdominal wall; abdominal hysterectomy; R.; previous double ovariotomy (16 years).

149.—E.M., 34, M.; Dr. W. Love; Oct. 18th; uterine fibroid, double chronic inflammatory disease of the appendages; abdominal hysterectomy; removal of right appendages; R.

150.—K.G., 46, M.; P.; Dr. H. E. Powell; Oct. 21st; uterine fibroid, commencing cystic degeneration; abdominal panhysterectomy; R.

(To be continued.)

TWO CASES OF INTESTINAL OBSTRUCTION IN CHILDREN.

BY E. P. BAUMANN, M.D. EDIN., M.R.C.P. LOND.

CASE 1. *Acute intussusception reduced by manipulation.*—My first case was that of a little girl, aged nine years, the daughter of a relative, to whom I was urgently summoned on the evening of Sept. 17th, 1906. It appears that the child, who was convalescent from a recent attack of whooping-cough and in fair general health, had come home from school that afternoon complaining of "stomach-ache," the result, she said, of a fall whilst playing some game. As she complained of very severe pain and seemed ill she was put to bed and various domestic remedies were applied both internally and externally—amongst others, a dose of Gregory's powder was administered. Nothing served, however, to alleviate the condition and the child lay moaning and writhing in pain. She seemed after nightfall to become very collapsed and on measuring her temperature and finding that the thermometer registered less than 97° F. the parents became alarmed and sent for me in haste. On my arrival I found the patient in a state of collapse, with a pale face, sunken eyes, and a rapid and compressible pulse. She lay with her knees drawn up and complained of severe pain in the lower abdomen. The tongue was dry and furred. The temperature was subnormal. I ascertained, on inquiry, that there had been no movement of the bowels that day, nor had there been any vomiting. On palpation of the abdomen there was readily felt a tumour lying transversely immediately below the level of the umbilicus. The mass was cylindrical and sausage-shaped, distinctly curved, smooth, and of firm elastic consistence. Per rectum the rounded end of the tumour was distinctly felt, forced down against the finger when the patient strained and receding when the abdominal muscles relaxed. The finger on being withdrawn from the rectum was found to be coated with blood-stained mucus. I informed the parents that an intussusception existed and urged upon them the necessity for immediate operative interference. Before taking steps to secure surgical assistance I determined, however, to assay abdominal taxis. This method, a strong plea on behalf of which was advanced by Mr. Jonathan Hutchinson in the early "nineties," consists in kneading and manipulation of the abdomen and so attempting to reduce an intussusception. Ever since first I had read of this method I had been struck by its obvious value, but I had never before had an opportunity of putting it into practice. All the cases of intussusception I had previously met with were of longer duration, more or less firm adhesions having already formed. In the present instance the condition was probably of not more than at the most three or four hours' duration, and the case was consequently a very suitable one for taxis. I was able fairly well to grasp the tumour externally with the left hand and with the tip of the right forefinger in the rectum exerted a kind of bimanual manipulation, alternately increasing and relaxing the pressure with either hand. The tumour gradually disappeared with gurgling and borborygmus, and the child professed herself instantly relieved. I then ordered an enema to be administered, with the result that a copious motion was brought away. The abdomen was now quite flaccid and no further serious pain was complained of. After ordering a small dose of morphine I left the patient for the night. Three or four motions containing blood-stained mucus were subsequently passed and the child vomited once or twice. By the following morning the patient had completely recovered her normal health. For several days I anxiously awaited the trend of events, for the possibility of a recurrence was by no means excluded. There has been, however, no recrudescence of the symptoms, and it must be concluded that the manipulative measures were completely successful.

Remarks.—Unfortunately every case of intussusception is not so amenable to treatment as this one proved to be. In the majority of cases by the time the diagnosis is made adhesions have already formed and the necessary manipulations are then, on the one hand, little likely to be successful; and, on the other, not unattended by danger from the possibility of rupture of the gut with subsequent fatal peritonitis. In reference to the causation of the lesion in this case there were two factors of speculative interest, namely—(1) the convalescence from a recent attack of whooping-cough; and (2) the history of an injury to the abdomen. The former factor not infrequently figures in the history of cases of intussusception in children, whilst isolated cases have been recorded where abdominal trauma appeared undoubtedly to be the cause of the condition. In the present case both factors may have been of influence, the one in predisposing to and the other in determining the onset of the lesion.

CASE 2. *Subacute intussusception simulating dysentery.*—The second case was that of a female child, aged 15 months, whom I saw in consultation with Mr. W. Eddowes at Norwood, an outlying suburb of Johannesburg, on the night of Nov. 5th, 1906. The child had been ill for 72 hours with diarrhœa, the stools being loose and containing mucus and a considerable quantity of blood. A diagnosis of dysentery had been made and treatment administered in this direction without diminishing either the frequency or the unhealthy character of the motions. The temperature had at no time risen above the normal and tended rather to be subnormal. I was struck at the outset by the large amount of blood contained in the stools; the napkins looked like handkerchiefs used for a bleeding nose. With so much hæmorrhage considerable ulceration of the bowel must exist, and if there were much ulceration one would expect pyrexia at least at some stage of the illness. The stools varied in character, from a green and unhealthy to a yellow and natural colour, in the various diapers shown to me, and all contained blood and mucus. On inspection the child appeared to be fairly comfortable in spite of the frequency of the motions and she appeared to be in pain only at intervals when the legs were drawn up and there was evident intestinal colic. On examination the abdomen was found to be flaccid; in the left iliac region there was felt a small mass, about one and a half inches long and a finger's breadth in diameter. This mass, which was distinctly tender to palpation, by no means corresponded to the typical sausage-shaped tumour described in the preceding case; its presence very strongly suggested an

intussusception, but I had to confess that it might have been occasioned by an enlarged and inflamed gland, or even by a fæcal accretion. Rectal examination proved negative. I expressed my suspicions but did not meet with much credence, the more so as another member of the family, a boy, aged three years, had also that night passed a blood-stained motion. Now, the firmest adherent to the doctrine of the necessity for suspecting the existence of an intussusception in every unexplained abdominal derangement cannot conscientiously assert that this lesion occurs in an epidemic form in families. I was reluctantly compelled, therefore, tentatively to acquiesce in a diagnosis of dysentery. This I did the more readily in view of the fact that the treatment adopted—frequent doses of sodium sulphate by the mouth, together with high rectal injections of astringent solutions—was not directly inimical to either condition. Two days later, on Nov. 7th, I again saw the patient with Mr. Eddowes. No change had yet occurred in the frequency and character of the motions but the child was distinctly losing ground. There was no vomiting now or at any other stage of the illness. On abdominal examination I was unable to discover the mass which had been present at my first visit, but Mr. Eddowes informed me that he had distinctly detected it a few hours before my arrival. Now this alternating presence and absence of the tumour, accompanied by frequent bloody and mucous stools of an otherwise not decidedly unhealthy texture, is so characteristic of the condition that I with more firmness declared that in my opinion the case was one of subacute incomplete intussusception for which an immediate exploratory incision was indicated. Once more my dictum was rudely shaken by the discovery that the elder child, before mentioned, had also that morning voided a blood-stained motion. On the previous occasion his stool had been pale, loose, and distinctly blood-stained, leading one to fear that he might be at the beginning of an attack of dysentery: this time the motion was healthy and well-formed, containing only a streak of blood such as is not uncommonly produced in children by a rectal polypus. I performed a rectal examination with a view to discovering a growth of this character but the result was negative. I next suggested that the original patient, the baby, should be examined in a similar quest. A whiff of chloroform was consequently administered and a careful rectal examination undertaken, both digitally and by inspection through a speculum; the result was *nil*. Abdominal palpation also proved negative. On Nov. 9th Mr. Eddowes telephoned to me to the effect that the child was slowly sinking. On ascertaining that the elder boy was perfectly well and had passed no further blood in his stools I once more declared my views as to the existence of an incomplete intussusception. This time I decisively asserted my opinion, insisting that in immediate operative interference lay the only possible hope of saving the life of the patient.

On the following morning, the ninth day of the illness, Dr. G. A. E. Murray of Johannesburg was summoned to perform a laparotomy, which I witnessed. On opening the abdomen in the middle line coils of distended small intestine at once protruded. On tracing the gut downwards it was found to grow narrowed and its walls were seen to be discoloured, the congestion becoming more intense until, about the upper third of the ileum, a very small enteric involution was met with. The intussusception was readily reducible and the mesentery at this point was then anchored by a stitch or two to the peritoneum of the anterior abdominal wall. The whole operation occupied not more than some 20 minutes, the greatest haste being necessary in view of the extremely collapsed condition of the patient. Hot bottles, stimulants, and subcutaneous injections of normal saline solution were energetically employed, but without avail, for the child never rallied and death supervened two hours later.

Remarks.—This case appears to me to present many features of unusual interest which seem to render it worthy of the detailed description I have given of its course. In the first place, there is the fact of the comparative rarity of these cases of incomplete intussusception in which the occlusion of the bowel is incomplete and the passage of faeces continues unimpeded, whilst there is little or no vomiting. These cases may last for weeks or become chronic and exist for months or years, death in most instances being due to exhaustion. Secondly, there was the considerable amount of hæmorrhage from the bowel. Usually, in subacute or chronic intussusception the catarrhal changes at the neck of the involution are comparatively slight and the stools are characterised only by small hæmorrhages. Thirdly, there was the similarity to a case of dysentery—superficial, it is true, yet sufficiently exact to obscure the diagnosis. In a paper on chronic intussusception published in the *Transvaal Medical Journal* of November, 1905, I drew attention to the frequency with which diagnostic difficulties of this character arise. Fourthly, there were the disappearance and reappearance at intervals of the abdominal tumour. According to Treves, a tumour is felt on abdominal examination in only 50 per cent. and rectally in only 32 per cent. of these cases, and in the paper already quoted I have drawn attention to the recognised fact that the tumour, once it has been felt, may disappear from time to time. For this reason it is essential that the examination of the abdomen should be undertaken both thoroughly and repeatedly. Fifthly, the fact that another child of the same family should also, and at about the same time, have passed blood-stained motions was perhaps the most perplexing factor of this difficult case. Had it not been for this fact I should have insisted upon operative interference on the occasion of my very first visit, when the patient was still of comparatively good health and the prospects were favourable. In the circumstances we had to await developments in the second child and in the meanwhile lost valuable time. Mr. Eddowes has since informed me that a few days after the death of the patient a native servant of the same household had developed undoubted dysentery, for which he was successfully treated at the Johannesburg Hospital. The question thus arises as to whether it is possible that both children had also suffered from dysentery, the baby developing her intussusception as a sequela to this disease. If so, one would expect the elder child to have been constitutionally affected, whilst apart from his blood-stained motions he appeared throughout to be in perfect health. The parents themselves attached little importance to his condition and the mother informed me that all her children from infancy had been known occasionally to pass blood in their stools whilst enjoying perfect health. Lastly, the fact of the situation of the intussusception in the course of the ileum is of interest, the enteric being one of the rare forms of intussusception.

Johannesburg.

A CASE OF PNEUMOCOCCAL CEREBRO-SPINAL MENINGITIS SIMULATING "SPOTTED FEVER."

BY AUGUSTUS H. COOK, M.B. LOND.,
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AND
G. F. McCLEARY, M.D., D.P.H. CANTAB.,
MEDICAL OFFICER OF HEALTH OF HAMPSTEAD.

THE following case appears to be of especial interest at the present time in view of the prevalence of epidemic cerebro-spinal meningitis in various parts of the United Kingdom. The patient, a man, aged 24 years, was an architect's assistant and had been working in the vicinity of Hampstead for some months. He was a well-built young fellow of considerable prowess as an athlete. His previous health had been good, but there was a history of a slight attack of influenza about a month ago, and he is said to have had a severe attack of "sunstroke" (fever, severe headache, and vomiting) about eight years ago, when he was in bed a week. The patient's mother's brother is said to have died from meningitis some years ago after an illness of 36 hours.

The patient's illness began on Feb. 12th, when he returned from work in the evening complaining of headache and pains in the limbs. He vomited three times during the night. On the next day he got up for a few hours; he was "dull and heavy" but did not sleep. The temperature was 100·2° F. He took a dose of cascara and had several loose motions. During the night he apparently had a fit. On the 14th he was seen for the first time by us. In the morning the temperature was 100°, the pulse was 108, the respirations were 46, the tongue was dry and coated with brown fur, and the throat and pharynx were dry and glazed; there was no enlargement or ulceration of the tonsils. He was in a semi-comatose condition and could only with difficulty be roused. The heart and lungs were normal except that there were some dry rhonchi at the

right base. There was a well-marked eruption, chiefly on the shoulders, chest, and back, but extending also to the abdomen, arms, and legs. It consisted of purpuric patches, the larger about a quarter of an inch in diameter, and small petechiæ resembling flea-bites. Kernig's sign and *tache cérébrale* were present but not to a marked degree, and there were no retraction of the head or muscular rigidity, and no strabismus or nystagmus. The pupils were equal and somewhat dilated and reacted sluggishly to light. His face was flushed and his appearance resembled that of a pneumonia patient, the movements of the alæ nasi being well marked. The urine was of specific gravity 1034, with a slight trace of blood and albumin. In the evening he had delirium of a muttering type and was unable to answer questions. During the night he had a slight fit. On Feb. 15th the patient was worse. He was unconscious and the breathing was more laboured. The temperature was 101·2°, the respirations were 50, and the pulse was 110. The right side of the face was now paralysed and the right arm and leg were flaccid and motionless. The left limbs were in constant movement, the left hand picking at the bedclothes, and the fingers presenting movement of athetosis. There was no cardiac murmur. A few rhonchi were heard at the base of the right lung, but there was no evidence of pneumonia. There were no ocular symptoms and no head retraction or rigidity of muscles. The patient became worse and died at 6.30 on the morning of Feb. 16th. A specimen of the cerebro-spinal fluid withdrawn by lumbar puncture was found to contain large numbers of the diplococcus pneumoniæ of Fraenkel. Weichselbaum's diplococcus intracellularis was absent.

A necropsy was made on Feb. 17th. On opening the skull a considerable quantity of thick purulent fluid was found over the vertex in the pia-arachnoid space, most marked over the left hemisphere and affecting chiefly the occipital and frontal convolutions. At the base the nerves were found to be matted together. The dorsal surface of the cerebellum was thickly coated with the exudate which extended over the pons into the orbital region and into the fissures of Sylvius and Rolando. The mesial surface of the brain was also involved. Both lateral ventricles were dilated with excess of fluid. The basal nuclei were healthy. There was no sign of hæmorrhage. In the left lung a few small areas of consolidation were found in the upper part of the lower lobe, but there was no hepatisation. The bronchial glands at the root of the left lung were caseous. The right lung was normal. The heart muscle was flabby but the valves were normal. The liver and kidneys were congested but otherwise normal. The spleen was enlarged and diffluent.

The chief points of interest in this case appear to be (1) the presence of a well-marked purpuric rash in cerebro-spinal meningitis of pneumococcal origin; and (2) the absence of such characteristic symptoms of cerebro-spinal meningitis as head retraction, muscular rigidity, strabismus, and nystagmus. The case also emphasises the importance of a bacteriological examination of the cerebro-spinal fluid in cases of this kind.

Hampstead, N.W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON TWO CASES: RUPTURE OF THE AORTA AND RUPTURE OF THE LEFT VENTRICLE.

BY REGINALD A. FORSTER, M.B., CH.B. ABERD.,
ASSISTANT PHYSICIAN, ROYAL ASYLUM, ABERDEEN.

THE first case was that of a female patient, aged 79 years. She was slightly demented and for several years had led a quiet, regular life. She had been confined to bed for three weeks prior to her death, suffering from bronchitis with pyrexia, but had been convalescent for four days when she died suddenly on the fifth morning. At 10.5 A.M. on that day, while lying in bed, she all at once became very pale and died immediately

The post-mortem examination revealed the following conditions. Both lungs were markedly emphysematous; the pericardial sac was found to be distended with about four fluid ounces of serum and a firm blood clot, weighing nine ounces, which encased the heart. The heart was large and the aorta somewhat dilated. On opening the aorta a large rent was seen in the lower and posterior walls of the arch, measuring three inches in length and extending round three-quarters of the circumference of the vessel. The blood had evidently broken through the inner and middle coats of the aorta, dissected its way down in the tissues between the aorta and pulmonary artery, and finally at the origin of the latter vessel from the heart had burst into the pericardial sac. The walls of the aorta were thinned and showed some small atheromatous patches, though there were no marked signs of degenerative changes. The valves of the heart were healthy and competent.

The second case was that of a male, aged 57 years, who was also slightly demented and had not done any physical labour for two years. For the past nine months he had been in failing health; his arteries were very atheromatous and his general appearance was that of premature senility. He complained of a general feeling of weakness but had no pains of an anginal nature. The night before his death he went to bed apparently in his ordinary health. The next morning, while still in bed, he suddenly became very pale, gave two inspirations of a gasping character, and died.

At the post-mortem examination the left lung was found to be collapsed completely, evidently an old-standing condition, and occupied only a very small space in the upper part of that side of the chest, to the wall of which it was firmly adherent. The right lung was slightly emphysematous. The pericardial sac contained about six fluid ounces of serum and five and a half ounces of soft blood clot. A rupture, measuring half an inch in length was present in the anterior wall of the left ventricle, close to the intraventricular septum and midway between the apex and base of the ventricle. The edges of the rupture were ragged and the hole through the ventricular wall was cone-shaped, the base of the cone being the external opening. The heart muscle was flabby, but there was no naked-eye appearance of fatty degeneration. The aorta was atheromatous and numerous calcified plates were seen in its walls. The descending branch of the left coronary artery was almost completely occluded at its origin by atheromatous degeneration of its walls, and at this point the vessel was of a stone-like hardness. This branch was traced down to the site of rupture and evidently the myocardium, deprived of its blood-supply by the atheromatous obstruction, had undergone the necrosis spoken of by Ziegler as myomalacia cordis. The wall of the ventricle thus weakened by the necrosis had given way. The fact that the retracted left lung gave no support to the heart on that side may also have been a factor in the resulting rupture. Both these patients had been inmates of the Royal Aberdeen Asylum for some years.

I am indebted to Dr. J. Reid for his permission to publish these cases, and I have to thank Dr. Duncan of the pathological department at the University of Aberdeen for his kind assistance in the preparing of the specimens.

Aberdeen.

NOTE ON A CASE OF STREPTOCOCCUS WOUND OF THE FINGER.

BY W. P. COWES, M.D.,
SURGEON TO THE BOSTON DISPENSARY; FORMERLY SURGEON TO THE ACCIDENT WARD, MASSACHUSETTS GENERAL HOSPITAL.

THIS case is reported as the unusually short period of incubation is of interest.

The patient, who was a married man, 44 years of age, was seen in the accident ward of the Massachusetts General Hospital on Oct. 28th, 1905. The history was as follows. About 8.30 A.M. on that day he was sparring with a fellow workman and in delivering one of his blows he struck the back of the index finger of his right hand against his opponent's tooth, making an incised wound. He was seen at the accident ward before 12 noon that day. Examination showed a wound on the index finger just posterior to the first knuckle; this was seared over. There was no other wound found nor were there evidences of any septic places around the hand. On opening the wound pus was seen. A cover-glass preparation was made and a culture was taken. The wound was douched, very slightly enlarged, touched with carbolic acid and alcohol, and drained. The finger did well and the man

was soon discharged. The cover-glass showed numbers of streptococci and the culture was a pure one of that organism. From the time of the injury to the time when the man was treated could not have been over four hours.

Boston, U.S.A.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

NORTH-EASTERN HOSPITAL FOR CHILDREN, HACKNEY-ROAD, E.

A CASE OF VOLVULUS OF THE SMALL INTESTINE IN A CHILD, AGED SEVEN YEARS.

(Under the care of Mr. J. P. LOCKHART MUMMERY.)

FOR the notes of the case we are indebted to Dr. G. P. Norman, late house physician and acting resident medical officer.

The patient was a boy, aged seven years. He was sent to the North-Eastern Hospital for Children as a case of appendix abscess. The history was that for some time the child had had a bad cough but it had got slightly better recently. At 6 A.M. on the day before admission the child complained of severe pain in the abdomen. Two hours later he was sick and vomiting continued throughout the day at frequent intervals. There was no action of the bowels, though he had had a normal motion on the previous day. On the next day the pain continued and he vomited twice in the morning. The mother did not notice anything special about the vomit. He was seen by a medical man in the afternoon who sent him to the hospital at once.

On admission at 4 P.M. his face was flushed and he seemed in pain. His respirations were rapid and noisy. The pulse was very rapid and running. He did not vomit after admission. Râles and rhonchi were present in both lungs but there was no dulness. The lower part of the abdomen did not move with respiration and a swelling could be seen in the upper part of the right iliac fossa; the skin was not red over it. On palpation the swelling felt rounded and firm and was very tender. It was dull on percussion. Good resonance was obtained over the remainder of the abdomen. Per rectum nothing definite could be felt. There was no distension of the abdomen. The pulse-rate was 130, the respirations were 40, and the temperature was 99·8° F. The temperature was higher when taken at home. Everything seemed to support the diagnosis of appendix abscess and it was decided to operate. Mr. Mummery performed the operation under chloroform.

An oblique incision two inches long was made through the skin over the appendix area, the muscles were divided, and the peritoneum was opened. On opening the abdomen some blood-stained serum escaped and a black mass could be seen. The incision was enlarged and the mass was found to be a loop of intensely congested small intestine, close to the cæcum, which had been twisted on itself. It was extremely tense but still shiny. Gas slowly oozed from one pin-hole spot when the bowel was handled. As the twist could not be undone without bursting the bowel and its recovery was very doubtful it was decided to resect it. A pair of clamps was then put on the bowel at each end of the congested portion and the bowel was divided between the clamps and the affected portion removed, the peritoneum being ligatured in several portions. The ends of the divided bowel were united by means of a Murphy's button reinforced by a few sutures, this being the most rapid method possible. The incision through the peritoneum, muscles, and skin was then closed except at the lower end where a gauze drain fixed in a piece of india-rubber tubing was put down to the junction in the bowel. During the early part of the operation the condition of the patient was bad, but it improved later, though the pulse continued weak. Six ounces of normal saline solution were injected shortly after the operation, but the patient gradually grew weaker and died eight hours after the operation. On examining the portion of bowel removed the volvulus was found to have occurred around a caseating gland in the mesentery. It was only with considerable difficulty that the bowel could be untwisted, even after it had been removed.

Remarks by Mr. MUMMERY.—Volvulus of the small intestine is a very rare condition and is said not to occur in normal bowel. In this case the caseous gland in the mesentery appeared to have been the point about which the twist occurred and the direct cause of it. The close resemblance of the condition to appendix abscess was remarkable and it seemed hardly possible to have made any other diagnosis. The classical symptoms of acute obstruction were not prominent. Vomiting was well marked during the first 24 hours but on the second day had almost ceased and at no time was there fæcal vomiting. There was no distension of the abdomen at all and the swelling caused by the strangulated bowel was not resonant on percussion.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Human and Bovine Tuberculosis; with Especial Reference to Treatment by Special Kinds of Tuberculin.

A MEETING of this society was held on Feb. 26th, Mr. J. WARRINGTON HAWARD, the President, being in the chair.

Dr. NATHAN RAW read a paper on Human and Bovine Tuberculosis. He said that tuberculous infections of the human body were divisible into two groups: (1) those caused by the bacillus typus humanus, and (2) those caused by the bacillus typus bovinus. These bacilli were varieties of the same species, but gave rise, according to the method of infection, to quite distinct and different lesions. The cultural differences between bacilli of human and bovine origin were sufficiently characteristic when typical to differentiate them, but the microscopical appearances of the bacilli were not characteristic. His conclusions were based on a clinical observation of over 4000 cases of phthisis pulmonalis, including over 700 careful post-mortem examinations on cases of tuberculosis, together with laboratory research and animal inoculation. Provisionally he classified the various tuberculous lesions in the human species into two great groups as follows. Group I.—Lesions caused by the tubercle bacillus, typus humanus. (*a*) Phthisis pulmonalis; (*b*) secondary ulceration of intestines; and (*c*) tuberculous laryngitis. Group II.—Lesions caused by the tubercle bacillus, typus bovinus, conveyed by milk, ment, &c., and also by direct infection. (*a*) Acute miliary tuberculosis; (*b*) primary intestinal and mesenteric disease, including (1) tabes mesenterica, (2) tuberculous peritonitis, and (3) tubercle of the pelvic organs; (*c*) tuberculous lymphatic glands; (*d*) tuberculous joints and bones; (*e*) lupus; (*f*) tuberculous meningitis; and (*g*) tuberculous ulceration of the cornea. The chief object of the paper was to produce evidence of an important character, as the result of the inoculation of animals, to show that tuberculous glands of the neck are of *bovine* origin, the result of absorption through the tonsils and mouth. Human and bovine tuberculosis were apparently antagonistic to each other and a mild attack of one seemed to confer immunity against the other. This had an important bearing on treatment. He had had a new tuberculin prepared based on these observations and results would be announced.

Dr. DAVID LAWSON said that he had been struck by the fact how seldom the so-called surgical forms of tuberculosis were present in cases of well-marked pulmonary tuberculosis. Out of some 700 cases of pulmonary tuberculosis in various stages of the disease he had only seen three cases with surgical tuberculosis. On the other hand, he had difficulty in accepting the suggestion that the difference in infection was due to a variation in the organism. Miliary tubercle was said by Dr. Raw to be due to the bovine type, whilst pulmonary phthisis was due to the human type, and yet it was not uncommon to see pulmonary tuberculosis terminate in a miliary tuberculosis, and he could not think that the patient had become infected by another variety of the organism. Dr. Raw had stated that T.R. tuberculin did not exert a beneficial

action on pulmonary tuberculosis. He had treated some 20 cases by tuberculin controlled by the opsonic index and he was convinced that in many cases it had achieved a great deal. Dr. Raw distinguished between two forms of abdominal tubercle: (1) a primary form due to the bovine type, and (2) a secondary form due to the human type. In many cases of pulmonary tuberculosis running an unfavourable course there was evidence of intestinal infection and he thought it was difficult to accept the suggestion that this was due to a fresh infection by a bovine type.

Mr. J. P. LORD said the question raised was of great importance as regards public health. If milk was infected with tubercle it might be either the bovine or the human variety: if the bovine the cows could be tested and the source of infection traced; if the human variety it was a matter of difficulty to trace the infection. He asked by what means it was possible to distinguish between the bovine and human variety.

Dr. G. A. CRACE-CALVERT said that he did not think that the report of the commission altogether supported Dr. Raw's contention. It had been possible by the passage of the human bacillus through calves to obtain a bovine type. The two types were not certainly different. The fact that T.R. tuberculin would act in all varieties of tuberculosis was a point in favour of the identity of the two types of the organism. In support of this view he quoted the following cases, the first a case of pulmonary tuberculosis which healed after eight inoculations of T.R. tuberculin; the second, a case of tuberculous abdominal gland which recovered after four inoculations. In the report of the commission both human and bovine tubercle came from the cervical glands, and there was no class of case which could be said to be definitely bovine or human.

Dr. HOWARD H. TOOTH asked what precautions were taken with regard to the injection, and whether the opsonic index had been taken.

Dr. F. M. SANDWITH said that in Egypt every form of tuberculosis mentioned in the paper was common except tuberculous meningitis. In Egypt surgical tuberculosis was most common. Tuberculin had been used with bad results. He did not think it rare for pulmonary tuberculosis to follow tuberculous glands. In Egypt the mothers often suckled their children for two years, and when cows' milk was given it was nearly always boiled. Tubercle was extremely rare in cattle in Egypt and yet all forms of tuberculosis were common except tuberculous meningitis. This fact did not support the distinction of types of bacilli, but he thought that the investigation of the disease in Egypt might present some interesting results, for human tuberculosis was common, while bovine tuberculosis was rare.

The PRESIDENT also commented on the rarity of pulmonary tuberculosis in association with surgical tuberculosis.

Dr. RAW, in reply, said he did not think that T.R. tuberculin had any beneficial effect on pulmonary tuberculosis. He thought it was possible to distinguish between varieties of the tubercle bacilli by culture. Avian tubercle was quite distinct from bovine and human tubercle. He thought it of the greatest importance to eradicate tuberculous cattle from the herds which supplied milk to the large towns, for a single tuberculous cow might infect the whole of the milk coming from that herd.

MEDICAL SOCIETY OF LONDON.

Operations for Malignant Growths of the Naso-pharynx and Pharynx.—Hæmaturia due to Bilharzia Hæmatobia causing Papillomata of the Bladder.

A MEETING of this society was held on Feb. 25th, Mr. C. W. MANSELL MOULLIN, a Vice-President, being in the chair.

Mr. F. S. EVE read a paper on Some Operations for Malignant Growths of the Naso-pharynx and Pharynx. He first alluded to the complexity of the subject of operations in this region. It was often found that the superior maxilla had been sacrificed unnecessarily and the contour of the face and the patient's power of mastication impaired thereby. To meet many of these cases he had designed an osteoplastic operation which obviated the removal of the superior maxilla. By his procedure the superior maxilla was raised from its bed and bent upwards and forwards without removal. This gave a full view of the naso-pharyngeal cavity. Any growth present could then be removed and the superior maxilla replaced. Several cases were referred to. The first time that the operation was performed by Mr. Eve was in October, 1904, but the patient died from shock. The next case was operated upon in February, 1906, with complete success, the patient being presented before the meeting and the tumour, a fibro-sarcoma, exhibited. Lately Mr. Eve had slightly modified his procedure, for which he claimed the following advantages: the avoidance of parotid fistula or interference with the lacrymal duct and the preservation of the superior maxilla. On the other hand, the risk of shock by interference with the structures at the base of the skull was considerable and the division of the lower fibres of the facial nerve was inevitable. The procedures of various surgeons were then described and discussed—namely, the methods of Watson Cheyne, Annandale, Langenbeck, Nélaton, Chalot and Guérin, and Kocher. Mr. Eve then referred to malignant disease of the tonsil and certain pharyngeal growths, most of which were best removed through the mouth. One of the chief causes of death in such cases was pneumonia; this was best prevented by a preliminary laryngotomy. Laryngotomy and tying the external carotid Mr. Eve regarded as necessary preliminaries in all operations for extensive pharyngeal tumours.—Mr. MANSELL MOULLIN congratulated Mr. Eve on his paper and the success of the case shown. He (Mr. Mansell Moullin) had employed the operation described by Mr. Eve. The chief difficulty was the preservation of the soft palate and this could be done by removing the periosteum with its muscular attachments from the hard palate.—Dr. F. PARKES WEBER and Dr. F. J. POYNTON discussed the prognosis of these cases and Mr. EVE replied that in many instances the tumour presented quite a low degree of malignancy. A case of lymphosarcoma, for instance, had remained well for many years.

Mr. H. J. CURTIS read a paper on a case of Hæmaturia due to Bilharzia Hæmatobia causing Papillomata of the Bladder, which were removed by suprapubic cystotomy. The patient was a Matabele boy, aged about ten years, who had suffered for some months previously from pain over the bladder, frequency of micturition and incontinence, and hæmaturia. The urine was tinged with bright blood throughout, whereas usually in such cases the blood came only at the termination of micturition. The case occurred in Rhodesia, where infection by the bilharzia, except in people coming from outside, was practically unknown. The symptoms suggested the presence of stone or villous tumour. The presence of calculus was negatived by sounding and suprapubic cystotomy was performed and the growths, wherever possible, were excised and the nodular condition of the vesical mucous membrane was treated by daily irrigation through the wound with a solution of silver nitrate, increased gradually from half a grain to two grains to four ounces of distilled water. The patient was able to be up and about within a week or two of the operation. Only twice during a period of four months was a faint tinge of blood visible. The condition of the patient remained satisfactory and when heard of two years later there had been no obvious recurrence of symptoms. Microscopic examination of a papilloma revealed the presence of numerous ova of the bilharzia hæmatobia in the substance of the growth. Such definite tumour formation as the result of irritation by an animal parasite was interesting in relation with the more complex question of the origin of cancer. Attention was also directed to the important observations of Captain S. R. Douglas, I.M.S., and Major F. W. Hardy, R.A.M.C.,[1] that of the cells found in the urinary deposit in 50 cases of soldiers suffering from bilharzia disease treated at Netley Hospital a very large proportion were found to be eosinophiles, and that in the presence of bilharzia the average percentage of eosinophiles in the circulating blood was increased to 16·4, and in one exceptional case to 40 per cent. (the normal being 4 or 5 per cent.). It was so also in disease produced by other parasitic worms, such as trichinosis, hydatid disease, and dracontiasis (guinea-worm), a useful point to remember where the diagnosis was obscure. As a rule, the diagnosis was readily made by the presence at the end of micturition of blood teeming with ova having a characteristic spine at one end. The disease was practically unknown in Rhodesia, the present case being the third treated in Buluwayo Hospital according to the Reports for 1897–1906. All three cases—two whites and one native—

[1] THE LANCET, Oct. 10th, 1903, p. 1009.

probably became infected from outside Rhodesia, the disease being endemic along the east coast of South Africa, in Natal, the Transvaal, and the Cape, and notably in Egypt. According to Captain Douglas and Major Hardy, the endemic area of the disease in Africa had been widely extended by the movements of infected soldiers, and the possibility of extension of the disease to other countries needed therefore to be borne in mind. Mr. Curtis also considered the mode by which infection occurred, the prognosis, and the means of treatment. One of the papillomata and microscopic sections were exhibited.—Mr. MANSELL MOULLIN remarked that bilharzia was certainly becoming more common than formerly, judging by his experience at the London Hospital. He had found urotropin a remedy of value.—Dr. F. M. SANDWITH recalled the fact that it was 40 years ago since the late Dr. John Hardy first directed attention to the subject of bilharzia. Dr. Sandwith had made search in the Egyptian papyri and it seemed probable that this disease was not referred to. In the present day there had been at least 100 soldiers discharged from the British army for the disease. Two cases had been recorded in persons who had never been out of the British isles, one by Mr. Berkeley Hill and one by Major E. C. Freeman, R.A.M.C. If it could spread in this way to one person it might do so to others. The parasite might, it was true, enter the body by the stomach but it could not live in an acid solution; probably it entered by the skin. The presence of eosinophiles was not a diagnostic feature as it occurred in various other diseases. He had tried urotropin. Undoubtedly it turned a septic cystitis into an ordinary cystitis but did not diminish the number of ova in the urine. No certain remedy had yet been discovered but the filix mas was the best. Some cases were cured by surgical measures. Papillomata occurred late in the disease. The disease produced many hundred deaths in Egypt and there must also be a very great number of cases in South Africa.—Mr. EVE referred to some specimens sent to the Hunterian museum some years ago by Mr. Herbert Milton of Cairo.—Mr. CURTIS replied.

CLINICAL SOCIETY OF LONDON.

Spinal Meningocele treated by Operation after Rupture.—Resection of the Jejunum and Colon for Carcinoma.—A New Method of Excision of Joints.

A MEETING of this society was held on Feb. 22nd, Dr. W. HALE WHITE, a Vice-President, being in the chair.

Mr. RAYMOND JOHNSON and Mr. C. E. REYNOLDS described a case in which a Meningocele in the Sacral Region was successfully treated by operation in an adult after the sac had ruptured spontaneously. The patient was a woman, aged 22 years, in whom the tumour of the back had only been noticed for about two years. The tumour was of the size of a large orange, and after spontaneous rupture of the thin skin covering its summit large quantities of cerebro-spinal fluid continued to escape. An operation was performed and the small opening by which the sac of the meningocele communicated with the theca was treated like the neck of a hernial sac and ligatured, the rest of the sac being removed. On the sixth day after the operation cerebro-spinal fluid again began to escape from a small opening in the otherwise healed wound. For 37 days the free discharge continued. A second operation was then undertaken and a very small opening which led into the theca was closed by suture. From this date no further leakage occurred and the wound remained soundly healed. Several months later the woman was reported to be in perfect health. A point of interest in this case was that the tumour formed by the spinal meningocele was not noticeable until adult life had been reached, although a small dimple in the skin over the coccyx had been present from birth. It was further of interest that during the period of more than a month, when cerebro-spinal fluid was constantly escaping in large quantities, the patient presented no symptoms directly attributable to the loss.—Dr. HALE WHITE referred to Dr. StClair Thomson's case in which large quantities of cerebro-spinal fluid dripped from the nose. The patient lost three times as much fluid that way as by the kidneys and yet was in perfect health.—Mr. W. G. SPENCER said that he had operated on a similar case which was leaking and suppurating at the time. There was a dermoid cyst in the wall of the meningocele and this was probably the source of the irritation that had promoted rapid growth. In the present case the amount of fluid might have been due to local sepsis and so caused no general symptoms, because it was derived merely from a local area. He detailed two operations which he had performed in infants suffering from a like condition.—Mr. C. H. FAGGE said that with a view to the prevention of leakage he was in the habit of first suturing the dura mater transversely, then dissecting up elliptical flaps from the deep fascia of the erector spinæ, and suturing this longitudinally over the dura mater.—Mr. JOHNSON, in reply to Dr. ALEXANDER MORISON, said that no changes in the pulse-rate had been noted as the result of the loss of fluid. Indeed, the only change noted was relief of the headache. He disagreed from Mr. Spencer's explanation of the source of the fluid in the present case, because cultures were sterile till quite late, and then the appearance of staphylococcus albus did not coincide with any increase in the amount of fluid poured out.

Mr. FAGGE communicated a case of Resection of the Jejunum and Colon for Carcinoma. The patient, a woman, aged 33 years, was admitted to Guy's Hospital with a history of attacks of abdominal pain, relieved by vomiting, extending over three months; the vomiting had been more severe for the past three weeks. A hard lump was felt in the right iliac fossa. To the left of this was seen a peristaltic wave in a large coil passing from left to right. The temperature was 96° F. and the pulse was 118. The abdomen was opened on the day of admission, Dec. 11th, 1905. A malignant mass was found in the jejunum 18 inches from the duodenum, involving also the hepatic flexure of the colon. The jejunum and colon were resected and closed, and double lateral anastomosis of jejunum to jejunum and ascending to transverse colon was effected with small and large Murphy's buttons, the former being passed about six weeks, and the latter four weeks, after operation. Microscopically the growth was a carcinoma.—Dr. HALE WHITE commented on the youth of the case recorded. He shortly described a case occurring in a man aged 32 years. Duodenal ulcer had been diagnosed, but at the operation a jejunal growth was found and short-circuited. The patient died later with secondary deposits.—Mr. T. H. KELLOCK inquired whether any symptoms of stricture had appeared as the result of the use of Murphy's buttons. He agreed as to the difficulty of deciding in the matter of the treatment of such cases, as the surgeon was practically deprived of the two-stage method of procedure.—Mr. FAGGE said that no symptoms at all were present in January of this year. As a general rule he thought that the use of Murphy's button was not good surgery, but it certainly saved time in many cases.

Mr. KELLOCK read a paper entitled "Excision of Joints, a New Method of Operating at the Shoulder." Attention was first drawn to the fact that comparatively little change had taken place in the technique of the operation on the various joints. Comparison was made between the operation of excision as performed at the hip and at the shoulder: in the former the section of bone was made within the capsule, and no muscular attachments to the femur were disturbed, whereas at the shoulder the humerus was divided through the surgical neck and the insertions of the important muscles into the tuberosities were sacrificed as well as, in the case of a child, the most important seat of growth of the humerus. The operation now described was an endeavour to save these muscles and the epiphyseal line, whilst still preserving a moveable joint; it was carried out by removing the necessary amount of bone from the scapular instead of the humeral side of the joint. The operation as performed on the dead body was comparatively easy. After opening the joint by a long anterior incision the muscles attached to the upper end of the humerus were retracted; the coracoid process was broken but not completely separated and turned a little downwards with the origins of the biceps and coraco-brachialis muscles. The neck of the scapula was then sawn through and the glenoid cavity completely removed, sacrificing only the long tendon of the biceps and a part of the middle head of the biceps and structures of comparatively little importance. The patient on whom the operation had been performed was a man, aged 41 years, who had sustained a dislocation of the left shoulder, complicated by fracture at the surgical neck of the humerus 11 weeks previously. The fracture had united firmly in good position, but the subcoracoid dislocation remained unreduced. At the operation the glenoid cavity and part of the neck of the scapula were removed by gouge forceps and the head of the humerus fell back easily into the cavity. Passive movements were commenced early. The result had

been very fairly satisfactory; flexion and extension were quite good, abduction was fair, but rotation of the humerus on its own axis was poor. All these movements were improved by exercise and rubbing. It was pointed out that should the operation be performed again for a similar pathological condition it might be advisable to add a posterior incision to the anterior one and so possibly divide the neck of the scapula from behind, and also to remove a little more bone from the neck of the scapula than was done in this case.—Mr. SPENCER said it was difficult to define such a laxly used term as excision. At the shoulder-joint the posterior incision had long been recommended; the circumflex nerve had, of course, to be avoided.—Mr. JOHNSON asked as to the nature of the passive movements used. He suspected that sometimes too vigorous early movement defeated its object by causing more cicatricial tissue to form.—Mr. KELLOCK, in reply to a question by Mr. C. GORDON WATSON, said that he sacrificed the upper part of the long head of the triceps as well as the long head of the biceps: these were less important than the muscles inserted into the upper end of the humerus because they had other attachments. As to the passive movements he agreed with Mr. Johnson. In the present case he had, for special reasons, begun them on the tenth day but as a rule he waited until later. He recognised that the operation he now proposed was rarely applicable to cases of disease, such as tuberculosis, for this usually affected the humerus more than the scapula.

PATHOLOGICAL SOCIETY OF LONDON.

The Parathyroid Glands in Man.—A Histological Study of the Human Parathyroid Glands.

A MEETING of this society was held on Feb. 19th, Dr. P. H. PYE-SMITH, the President, being in the chair.

Dr. DAVID FORSYTH read a paper founded on a detailed examination of the Parathyroid Glands in nearly 60 human bodies. After referring to the contradictory views held on the subject, some regarding the bodies as essential in the highest degree to life, and others looking on them as mere embryonic rests of thyroid tissue, he began by describing the naked-eye anatomy of the glands. Their number, though generally two to each lobe of the thyroid, was inconstant and might be three, four, five, or even six. Their position in the neck was variable, but they showed a predilection for certain sites and never lay superficial to the sterno-hyoid, sterno-thyroid, or omo-hyoid muscles, being invariably wrapped in the same compartment of the deep cervical fascia as the thyroid gland. They were to be sought either at the junction of the upper and middle thirds of the posterior border of the thyroid lobe or at the junction of the middle and lower thirds or around the posterior pole. Their relative numbers in these positions were 4 : 3 : 2. Other less common sites were the interior of the thyroid lobe, the connective tissue round the superior pole or hidden between the thyroid and the trachea. A parathyroid was found in the anterior mediastinum of the thorax. The frequent absence of distinguishing features was probably the cause of their being sometimes overlooked and the risk of omission was further increased seeing that parathyroid tissue might be associated with lymphatic glands, thymic residues, or accessory thyroids, without arousing suspicion as to the composite nature of the whole. The typical parathyroid was an elongated, ovoid, slightly flattened body of a pale-pink hue with a smooth glistening surface on which ramified a few branching vessels. It very frequently contained much fat and might present few features except those of a nodule of well-vascularised adipose tissue. This variety would be specially liable to escape recognition. Some specimens were brown in colour like accessory thyroids, while rarely a parathyroid black in tint might be found. The size varied from 2·5 centimetres by 0·5 centimetre and there was no constancy in the total volume of parathyroid tissue in different subjects, one individual having, perhaps, 10 or 20 times as much parathyroid tissue as the next examined. A point of importance in connexion with the supposed embryonic character of the glands was the relation between parathyroids and accessory thyroids. It was clear that if isolated parathyroids became thyroidal their number would show a decrease with age, while accessory thyroids should increase and be found in the position occupied by parathyroids. Statistical evidence was adduced showing that parathyroids were most numerous in the first year of life, thereafter progressively decreasing till old age. Within the former period they occurred to the number of three to six; between the first and tenth years the greatest numbers were three and four; above ten years two was the maximum. On the other hand, accessory thyroids were not found in 75 per cent. of the infants under one year, in 43 per cent. of the children between one and ten years, and in 5 per cent. of the adults. These figures showed that up to one year of age parathyroids were 7·2 times as common as accessory thyroids, from the first to the fifth years 3·5 times, from the sixth to the tenth years 1·4 times, while between the eleventh and twentieth years equality was established. Thereafter the preponderance went to the accessory thyroids. Next the histology of the organs was considered in detail, the new facts brought forward by Dr. Forsyth being illustrated by microscopical specimens and lantern slides. While to some extent confirming the classic work of Sandström the present research showed that far from being embryonic and functionless the parathyroids normally secrete colloid material. Welsh's supposition that the organ contained two varieties of cells—the oxyphile and the principal—was quoted and it was shown that these were in reality two stages in the activity of one kind of cell. The principal cell was the exhausted cell and the oxyphile the rested cell. The protoplasm of the former gradually re-filled with eosinophile granules which were extruded into the surrounding lymphatic spaces and passed into the lymphatics either directly or after aggregating to form drops of colloid among the cells. Often the polyhedral parathyroid cells grouped themselves round a central lumen containing colloid and a definitely formed vesicle thus resulted. Photographs of all stages from the massed arrangement of the cells to a regularly formed vesicle were thrown on the screen and the resemblance of the last to the thyroid was noted. As a rule, any one section of a parathyroid showed cells in all stages of activity and rest and the changes in the cells during secretion were the same as those in the glandular epithelium of other organs. The secreted material agreed in its physical properties and micro-chemical reactions with that of thyroid colloid and the two appeared identical. Attention was drawn to the fact that for some little time after birth the parathyroid presented an immature appearance in contrast to that attained at a slightly later period. The infantile parathyroid had a uniform aspect of inactivity, the protoplasm of the embryonic cells being comparatively large in amount, but containing no oxyphile granules. Finally, mention was made of the pituitary gland which possessed clear cells and granule cells. In the course of this research many pituitaries, both of men and of animals, were examined and it would appear that the two varieties of its cells stood in the same relation to each other as the principal and oxyphile cells of the parathyroid. Cells intermediate in degree of activity between these two were found, as also were intercellular granular material, drops of secretion, and small vesicles.

Mr. W. L. HARNETT read a paper on a Histological Study of the Human Parathyroid Glands. After briefly summarising the work of the past 20 years on the parathyroid he gave a general account of the histology of the gland. The two types of cell ordinarily met with were described, the granular oxyphile cell and the clear principal cell; it was stated that transitional stages between these two were of common occurrence and the view was advanced that all were merely phases of the same cell, the oxyphile cell being the resting stage and the principal cell the discharged stage. The frequent occurrence of colloid in the gland was remarked upon and it was pointed out that the presence of colloid was associated with other evidence of activity in the presence of large numbers of oxyphile cells. Fat was found to be normally present in the gland when it showed signs of activity and it was stated that the gland which contained the most fat presented also the largest number of oxyphile cells and the greatest amount of colloid. After describing the appearances of the gland at various periods of life, he said that the conclusion to be drawn was that it began to show signs of activity in early childhood and became steadily more active as age advanced. No constant change was found in respect of which the glands from subjects dying from various acute and chronic diseases differed from the normal glands at about the same period of life. In a case of parenchymatous goitre, however, in a girl, aged 18 years, the glands contained a considerable amount of colloid and presented a picture of activity quite unusual at

this age. No grounds were found for supposing the parathyroids to be affected in Graves's disease or in tetany. The occasional resemblance of parts of a parathyroid to the fœtal thyroid was noted. The general conclusion was that the observations lent support to the view that the parathyroid was able when necessary to assume thyroid functions rather than to the view that it had a function of its own entirely unconnected with the thyroid and absolutely essential to the continuance of life.

OPHTHALMOLOGICAL SOCIETY.

Exhibition of Cases and Specimens.

A CLINICAL meeting of this society was held on Feb. 14th, Mr. R. W. DOYNE, Vice-President, being in the chair.

Mr. LUDFORD COOPER showed a case of Paralysis of the Vertical Movements of Both Eyes. The patient was a man in whom there was complete paralysis of the vertical movements of both eyes which had come on suddenly and for which no explanation could be found.—Mr. J. H. FISHER had seen two similar cases, one in a girl who was found one morning unconscious with this paralysis. She recovered consciousness rapidly but the paralysis persisted for a long time. The explanation he then gave was an embolism of one of the small arteries of the corpus quadrigeminum. The other case showed hemianopic pupil reaction without a hemianopic field, a condition never before recorded, and post mortem a diffuse growth of the lamina quadrigemina was found.

Mr. A. STANFORD MORTON showed a case of a man, aged 54 years, who two years previously received a steel foreign body in his right eye. The sight of this was immediately affected. About a month later the sight of the left began to fail and within three months was almost completely lost. Now the right eye showed typical siderosis, with atrophy of the nerve. The left eye showed a similar condition of the disc, the atrophy being of the post-neurotic type. There was marked arterial sclerosis in both eyes. The left pupil showed the Argyll-Robertson reaction. No sign of central nervous disease could be found.

Mr. MALCOLM L. HEPBURN showed a case of a man, aged 61 years, with Polycoria associated with Chronic Glaucoma. The sight of the right eye had become dim recently, though for the last three years he had noticed coloured rings round the lamps. He had had no pain. The left eye was normal in every respect. The right eye showed an unusual appearance of the iris which, he stated, had been present from birth. There was a complete pupil placed down and in which reacted to light, while the part between the pupil and the periphery was made up of five triangular-shaped bands of pigmented iris tissue, with their bases towards the angle. These bands inclosed clear spaces, through any of which the details of the fundus could be plainly seen. In addition to these bands an almost complete circular stump of pigmented tissue was visible at the angle of the anterior chamber, in which the bases of the different bands were lost. The patient stated that the pupil used to be in the centre of the eyeball, but of late years it had gradually come to occupy its present position. The fundus showed glaucomatous cupping of the disc. The case was interesting from a developmental point of view and two explanations were possible—one that the iris was originally complete and by subsequent atrophy, as the result of inflammatory action or otherwise, had partially disappeared; the other was a faulty development, which was difficult to understand, since the pupil was perfectly formed.—Mr. E. TREACHER COLLINS suggested as a possible explanation the failure of the formation of some of the loops of vessels which go to form the iris.

Mr. WAREN TAY showed a drawing of an Eye from a case of tuberculosis which was only diagnosed after an ophthalmoscopic examination had been made. This occurred 22 years ago. He showed this in order to disprove the statement of an eminent physician who stated that this had never been done.

Mr. J. H. TOMLINSON showed a Retinoscopy Longarm to facilitate the practice of retinoscopy in children.

Mr. W. HALLIBURTON MCMULLEN showed a case of Detachment of the Retina cured by two scleral punctures.

Other cases were shown by Mr. G. W. THOMPSON and Mr. G. H. POOLEY.

LIVERPOOL MEDICAL INSTITUTION.

Submucous Resection of the Nasal Septum.—Pulsating Exophthalmos; Ligation of the Common Carotid Artery.—Housing of the Working-classes in Liverpool.

A MEETING of this society was held on Feb. 14th, Mr. FRANK T. PAUL, the President, being in the chair.

Dr. W. PERMEWAN read a paper on Submucous Resection of the Nasal Septum. He described in detail and illustrated by lantern slides reproduced from Dr. StClair Thomson's drawings the method introduced by Killian of Freiburg and then briefly indicated the procedure adopted by Freer of Chicago. Dr. Permewan insisted on the advantage of operating under cocain, without a general anæsthetic, and said that there was practically no pain, no shock, and no hæmorrhage. He thought that a satisfactory result could always be predicted if the operator had sufficient experience and sufficient patience, but the operation should not be undertaken by anyone unskilled in nasal surgery. He then demonstrated the operation on a dissected specimen and showed the instruments used.—Dr. J. E. MCDOUGALL thought the submucous operation had a great future before it. He considered it an interesting speculation whether the efforts which had been made in recent years to establish free nose-breathing in children would reduce the frequency of intranasal operations in later life.—Mr. T. GUTHRIE could corroborate what Dr. Permewan had said as to the great value of the operation. He asked what Dr. Permewan considered to be the earliest age at which the operation should be performed. Freer regarded it as suitable for all ages, but stated that in children a recurrence of the deformity was probable unless the operation was a very thorough one. Was there any risk that in children the operation would involve a subsequent dropping of the bridge of the nose?—Dr. J. BARR and Mr. T. C. LITLER JONES also spoke.

Dr. A. NIMMO WALKER showed a case of Pulsating Exophthalmos successfully treated by Ligature of the Common Carotid Artery. The patient, a married woman, aged 29 years, had been admitted into St. Paul's Eye and Ear Hospital in May, 1906, with the history that six weeks previously she had been struck on the left temple by a large piece of wood, and on the following day had noticed a swishing noise in the head which became gradually worse, with increasing swelling of the left eye. The left eye was found to be proptosed, with dilated episcleral veins, hazy cornea, and œdematous conjunctivitis, while the right eye also was congested and prominent; pulsation could be felt in both eyes and, with the murmur, was controlled by pressure on the left common carotid. The artery was tied and a month afterwards the eyes were about normal. At the present time, eight months later, the only abnormality was enlargement of the episcleral veins of the left eye, the sight of which had recovered from doubtful perception of light to normal vision with the help of a correcting lens; the vision of the right eye had always been normal. Dr. Walker thought that in this case the artery had leaked into the cavernous sinus, but that this, far from being a contra-indication to operation, as had been previously taught, was indicative of its immediate necessity; whether the lesion was aneurysm or aneurysmal varix early ligature was recognised now as the right treatment, a result largely due to the teaching of his father, Mr. G. E. Walker, who had advocated this operation ever since his first case in 1878.

Dr. E. W. HOPE, medical officer of health of Liverpool, gave an account of the position of the city in regard to insanitary property and the measures taken by the corporation to deal with it. He explained the reasons in connexion with the rapid growth of the city which led, during the early part of the last century, to its development upon lines resulting in the erection of many thousands of dwellings of an insanitary character. A heavy legacy of insanitation had thus been left for future generations to deal with. In 1883 a special committee was appointed to deal with the masses of insanitary property existing in the city and from that year onwards, at varying rates of progress, the work had been proceeded with under the provisions of the Liverpool Sanitary Amendment Act. Dr. Hope explained the difficulties which had to be contended against and stated that upwards of a million sterling had been spent by the corporation in removing insanitary dwellings and re-erecting suitable habitations upon their

sites. The compensation for public-house property constituted a heavy item in the outlay. These premises, however, were not spared, as the council was well alive to the immense injury done by drunkenness in the city. Apart from the action of the corporation in removing slums, commercial enterprise had been active; railway companies, warehouse companies, and so forth had swept away large numbers of insanitary dwellings. In 1883 some 16,000 insanitary dwellings existed. These had now been reduced to between 6000 and 7000, and the corporation had recently decided, pending the sanction of the Local Government Board, to deal with six more areas under the Housing of the Working Classes Act, and to erect suitable dwellings upon them. These schemes were estimated to cost £270,000. The paper was illustrated by a number of slides showing the old and the new buildings, and the various points in connexion with these latter.—Dr. S. H. HOUSE exhibited a number of lantern slides, illustrating the life of the slum children, made from photographs taken in the course of his work as medical officer to the Society for the Prevention of Cruelty to Children.—Dr. G. G. STOPFORD TAYLOR said that the demolition of public-house property would not stem the tide of drunkenness. Education, regular employment, and public opinion could alone effect a reformation in the habits of the drunkard, and when these failed his children should be taken from him and brought up at the expense of the State in order to protect them from their vicious surroundings.—Dr. W. CARTER thought that the solution of the slum problem would largely depend upon the solution of the drink problem. Every successive medical officer of health of Liverpool had complained that their efforts at improved sanitation in the houses of the poor were rendered largely nugatory by the prevalence of intoxication. Years ago when the late Professor Parker and the late Professor Sanderson were invited by the corporation to inquire into the causes of the insanitary condition of Liverpool they gave a conspicuous place in their report to drunkenness among the working classes. The facts stated by Dr. Hope that £5000 a year were taken at three public-houses in one of the lowest districts of the city, and that in the whole city from one and a half to two millions sterling were spent yearly in intoxicating liquors were alarming. It was a good thing for Liverpool that its great public officers were not merely hard routine officials but had the enthusiasm of humanity to aid them in their great work.—Dr. A. G. GULLAN, Dr. W. WHITFORD, Dr. J. HILL ABRAM, and Dr. H. ARMSTRONG also spoke.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 7th, Dr. A. R. Galloway, the President, being in the chair.—Dr. Ashley W. Mackintosh read notes on a case of Myasthenia Gravis. The patient was a woman, age 31 years, with no nervous family or personal history, who began to show bulbar symptoms (difficulties of articulation, swallowing, and mastication) along with diplopia, ptosis, and external ophthalmoplegia; great general weakness of the limbs and ready exhaustion of muscles on exertion soon appeared. Under treatment the general condition of nutrition markedly improved but the limbs remained weak and easily tired. No sensory disturbances, no trophic signs, no fibrillary tremors, and no rigidity appeared at any time, and the sphincters were quite intact. Apart from occasional head pain none of the general symptoms of cerebral tumour were present. The involvement of the cranial nerves was very marked. There were double ptosis and external ophthalmoplegia, profound paralysis of the upper facial muscles and of the elevators of the lower jaw, great weakness of the lower facial muscles with the "nasal smile of Gowers," and great difficulty of articulation, mastication, and swallowing, the lips, tongue, and palate being markedly involved. There was weakness of the respiratory muscles with weak and useless cough. The tongue appeared to become smaller and somewhat wrinkled. The orbicularis palpebrarum gave the myasthenic reaction. Many of the symptoms varied greatly in severity from time to time and most of them were aggravated by continued use of the muscles involved. An alarming attack of syncope without any apparent cause took place, followed by a tendency to attacks of dyspnœa, and death ensued ten days later from collapse of the lung and aspiration pneumonia. The duration of the illness was about 11 months. No necropsy was permitted. The differential diagnosis was discussed at some length, special attention being drawn to the difficulty of distinguishing myasthenia gravis from hysteria and chronic bulbar paralysis. Remarks were made on recorded observations which had been made on the morbid anatomy of myasthenia, on the probable seat of lesion, and on the pathogenesis of this condition. It was believed that at present they could only agree with Gowers in regarding myasthenia as a nutritional disorder impairing the vital processes in the muscle, although Farquhar Buzzard's observations on the constancy of slight changes in a limited number of muscular fibres in every one of his cases were regarded as suggestive.—Dr. Peterkin read a paper on the Treatment of Acute Otitis Media. He first remarked on its very common occurrence and on it being almost always the forerunner of the chronic suppurating condition which was a menace to the efficiency and safety of the sufferer. The frequency of this chronic suppuration was due to the fact that physicians did not see a large number of the acute cases until too late, but also many physicians did not treat them as the serious condition which they undoubtedly were. He said that the treatment of acute otitis media was divided into two stages—that before and that after perforation of the tympanic membrane. During the acute stage the relief of pain was the most urgent requirement of treatment; for this one of the best remedies was a solution of carbolic acid in glycerine, 10 or 20 grains to the half ounce, with or without the addition of 10 grains of cocaine hydrochlorate. A few drops of this solution warmed and instilled into the ear every hour or two generally brought relief. Where it failed ear baths might be used. This consisted in filling the meatus with hot boric acid solution and allowing it to remain for a few minutes; this was repeated every hour or two and in the intervals hot boric fomentations were applied over the ear. Poultices were unhesitatingly condemned on account of their tendency to encourage sloughing. As internal remedies, particularly where the temperature was raised, an analgesic antipyretic was frequently useful and an opiate would probably be necessary in the evening. If those remedies failed there still remained free incision, not puncture, of the membrane. This very rarely failed to give relief. It relieved pain by relieving pressure, allowed the discharge to escape, and was the best site for bleeding. In the milder cases a vertical incision in the posterior inferior quadrant was sufficient, but in the more severe cases the incision ought to be carried up the whole extent of the drum and on to the posterior superior wall of the meatus. Incision ought to be done if the preliminary treatment did not give relief in 24 hours. When, however, there were indications for an earlier incision it ought not to be postponed. Such indications were a bulging membrane, high temperature, vomiting, convulsions, or any signs of cerebral irritation, and also any marked mastoid tenderness. The drum ought also to be incised at once in otitis media occurring in the course of the zymotics. The most useful local anæsthetic was one composed of equal parts of menthol, cocaine hydrochlorate, and carbolic acid. After the membrane had ruptured or been incised treatment must be directed to the promotion of drainage from the middle ear. Frequently syringing with a warm, mild antiseptic such as boric acid was enough to bring about healing, but if discharge continued after some days of this treatment peroxide of hydrogen might be used. This was best done before syringing so as to prevent irritation of the meatus. In the few cases where even this was not enough to effect a cure boric spirit drops used after syringing would frequently benefit the case. This was only to be used after all signs of acuteness had disappeared. It was advisable in using those drops to practise tragal massage until the spirit was felt in the throat. The insufflation of boric powder was not good as routine treatment. It might lead to the blocking up of discharge and even cause mastoid abscess. As to mechanical aids to drainage, middle-ear inflation ought not to be done while there was much pain, but although there was considerable diversity of opinion as to its use after pain had ceased Dr. Peterkin advocated its use. Young and Milligan's experiments on the cadaver were unsatisfactory and they had not proved their objection to the practice. The application of suction to the middle ear was another mechanical method of treatment which was complementary to inflation and did not replace it, as the opponents of inflation stated. The treatment of any lesion of the throat and nose was of the utmost importance and where it was non-operative it ought to be undertaken at once. Operative treatment, such as the removal of adenoids, ought to be undertaken so soon as the temperature had become normal;

it ought not to be put off until the otitis was cured. If discharge still continued from the ear, and as the patient might not know whether the ear was discharging or not the physician ought to see to it personally, at the end of six weeks the mastoid antrum ought to be opened. It was a mistake to wait for the classical symptoms of mastoid disease, as the patient might be very deaf before these appeared.

MIDLAND MEDICAL SOCIETY.—A meeting of this society was held on Feb. 13th, Dr. Arthur Foxwell, the President, being in the chair.—Mr. R. H. Rollinson-Whitaker showed a case of Graves's Disease in which he had tied the two superior thyroid arteries. The patient, a woman, aged 46 years, had suffered from Graves's disease for 15 years, and had for the last four years been practically bedridden. She had been unable to walk more than a few steps and those with great difficulty and often unable to feed herself from weakness and tremor. An operation, undertaken after three months' treatment in a nursing home, was performed under a local anæsthetic. After 48 extremely anxious hours, during which the patient showed signs of commencing acute thyroidism, great restlessness, vomiting, delirium, temperature 102° F., pulse 180, and respirations 44, she commenced to improve rapidly. 16 days after the operation pulsation in the thyroid had almost disappeared, the gland had diminished in size by four inches, and the pulse had fallen to 100. The general condition had gradually improved up to the present time when the patient was able to attend to her household and social duties and to walk considerable distances in all weathers.—Mr. W. Billington showed a case of Leontiasis Ossea in a girl, aged 19 years, who presented symmetrical bony outgrowths on each side of the nose. The nasal processes of the superior maxillæ were chiefly involved. Her facial appearance was typically leonine. The nasal ducts were obliterated and there was commencing nasal obstruction. The girl was a congenital syphilitic. The disease began six months ago and had progressed steadily and painlessly.—Mr. A. Lucas and Mr. J. Hall-Edwards showed a case of Lymphadenoma treated with Marked Improvement by the X Rays. The patient was a middle-aged man, with large masses of glands in the neck on the left side, in the left axilla, and in the left groin. He was exceedingly emaciated, cachectic, and so feeble that he could hardly stand, his breathing becoming laboured on the slightest exertion. The patient had not responded to ordinary therapeutical measures but after a fortnight of x ray exposures he commenced to improve and at the end of two months all the glands had disappeared and this disappearance of the glands was associated with a very marked improvement in the general condition, so that at the present time the patient was able to take long walks without undue fatigue.—Dr. J. G. Emanuel showed a case of Hyperidrosis. The patient was a man, aged 53 years, who had been troubled with a profuse sweating, after any exertion, affecting the left half of the face, head, and neck, and upper part of the trunk as low down as the intermammary line, an area corresponding to the distribution of the sweat fibres in the cervical sympathetic. The condition followed a severe attack of influenza and had persisted unchanged for two and a half years. The pupils were equal and reacted equally to light, accommodation, shade, and cocaine. There were no exophthalmos and no retraction of either lid. The question raised was whether this was due to partial paralysis of the right cervical sympathetic, with anidrosis of the right side of the face and a compensatory hyperidrosis of the left side, or to irritation of the left cervical sympathetic, or to a neurosis of central origin.—Mr. J. Furneaux Jordan showed two specimens. The first was a large, soft, melematous Fibroid of the Uterus removed from a woman, aged 48 years, who had suffered so severely from hæmorrhage that she could not sit up without fainting and since it continued under treatment and rest in bed operation was imperative. Her convalescence was prolonged. The second specimen was a large, pure Fibromyoma of the Right Ovary removed from a woman, aged 59 years. It was associated with great hydro-peritoneum and an umbilical hernia. The recovery was good.—Dr. J. Miller showed Blood Films from a case of Leukanæmia. The patient was a man, aged 46 years, who died after an illness of some three or four months in which breathlessness, lassitude, hæmorrhages from mucous surfaces, irregular temperature, and an enlarged spleen and liver were prominent features. Three weeks before death the blood count was as follows: red corpuscles, 1,500,000; white corpuscles, 30,000; hæmoglobin, 22 per cent.; and colour index, 0·73. There was marked poikilocytosis with macrocytes and microcytes, and numerous nucleated reds, of which a large proportion were megaloblasts. Of the leucocytes a considerable proportion were myelocytes, both finely and coarsely granular, and there were many basophiles and large lymphocytes. The spleen weighed 40 ounces and microscopically showed a typical leukæmic condition with multiplication of the endothelial cells and some fibrosis. The liver gave the iron reaction.—Dr. C. E. Purslow showed: 1. An Ovarian Cyst which had undergone spontaneous rupture. The patient had noticed a gradually increasing swelling of the abdomen for five months and two weeks before admission had been seized with sudden severe abdominal pain and vomiting lasting three days. The abdomen was opened and a gallon of free fluid escaped from the peritoneal cavity; the cyst was removed after tying its pedicle; it contained a small quantity of similar fluid and there was a free opening on its upper aspect. It proved to be a multilocular papillomatous cystoma. The patient made a good recovery. 2. A Cystic Kidney which before removal had exactly simulated an ovarian cyst. The specimen was from a single woman, aged 37 years, who had noticed a gradually increasing tumour in the abdomen for two years. There were no other symptoms and it was not till the abdomen was opened that the true nature of the tumour was ascertained. The peritoneal investment was divided, the tumour emptied by means of a trocar and then enucleated, and the pedicle tied. No drainage was employed. The patient made an uninterrupted recovery.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—A meeting of this society was held on Feb. 15th, Mr. Sydney Stephenson being in the chair.—The following cases were shown and discussed. Mr. Stephenson showed a case of Buphthalmos. The patient was a syphilitic child, aged ten months. The condition had been observed immediately after birth. The corneæ, which had been extremely cloudy, had cleared under treatment by physostigmine and mercury internally. Moreover, the operation of anterior sclerotomy had been performed upon the left eye. The child retained fair sight.—A case of Cretinism was shown by Dr. E. I. Spriggs and Dr. F. W. Higgs. The child, who was two years and seven months old, had always been backward. She was 26 inches high; the circumference of the head was 17½ inches. She could not walk or stand and was a typical cretin physically. The mind was equal to that of a normal infant of eight months. The complexion had already improved markedly since thyroid treatment was begun only three weeks ago. One grain of the extract was given three times a day. The weight fell half a pound and there were considerable restlessness and fretting, which ceased when the dose of thyroid was lessened.—A case of Cerebral Tumour was shown by Dr. Edmund Cautley. The patient was a boy, aged ten years. For six weeks he had had attacks of headache lasting 12 hours and terminating in vomiting about once a week. For two weeks he squinted, this being due to paralysis of the left external rectus. He had optic neuritis and exaggerated knee-jerks but no other abnormal signs were found on examination. Dr. Cautley suggested a small quiescent tuberculous focus in the superficial portion of the pons. Dr. Cautley also showed an infant, six weeks old, with a huge Inguinal Hernia in conjunction with basal meningitis. The condition of rigidity of the abdominal muscles made it doubtful if an operation should be done at present for the cure of the very large inguinal hernia.—A Lymphangioma or Lymphatic Nævus of the Left Side of the Tongue was shown by Mr. J. P. Lockhart Mummery. The patient was a boy, aged five years. The surface of the tumour showed small clear-walled cysts. It caused no inconvenience.—Three cases of Aortic Regurgitation were shown by Dr. J. Porter Parkinson; they were all in girls and of rheumatic origin. In one patient, aged nine years, there were aortic diastolic and mitral systolic murmurs. In the second case (aged 12 years) there was only an aortic regurgitant murmur with enlargement of the left ventricle, water-hammer pulse, and well-marked extensive visible arterial pulsation. In the third case (aged 14 years) similar signs were present, but in addition there were a presystolic thrill at the apex of the heart and presystolic and systolic murmurs in the same situation; the pulse was of moderate size, indicating that there could be little, if any, mitral stenosis.—A case of Cerebral Abscess after operation was shown by Mr. P. Turner. The patient, a girl, aged seven years, was operated on for an acute

mastoid abscess following right middle-ear disease on Dec. 4th, 1906. Attacks of *petit mal* had been observed for a year. After operation drowsiness supervened and a left-sided convulsion followed by hemiparesis. There was no headache, vomiting, or optic neuritis. Granulations were found blocking the opening from the antrum into the tympanum and removed but the dura mater was found to be healthy; the drowsiness and weakness then disappeared. Ten days later headache and drowsiness came on and a needle inserted into the temporo-sphenoidal lobe showed pus; the abscess was drained and recovery was then uneventful.—A girl, aged three years, with Undue Mobility of the Right Knee-joint was shown by Dr. F. J. Poynton. If semiflexed she could voluntarily move the tibia outwards and slightly forwards over the femur and back again into position. The movement was apparently due to the popliteus muscle. There was considerable laxity of the lateral and crucial ligaments. The movement was accompanied by a clicking sound. When the limb was extended there was no lateral movement and walking was not interfered with. The articulations of the wrist and fingers were to a lesser degree more mobile than natural.—A case of "Punch"-like Intonation in a Syphilitic Infant was shown by Dr. G. A. Sutherland. The child, aged three years, had been blind since birth and could not sit or stand. He was small and flabby and markedly rickety, with syphilitic scarring round the mouth. There were post-neuritic atrophy of the optic nerve and general choroidal atrophy. His speech, which was unintelligible, was squealing or "Punch"-like. The larynx appeared to be normal. Dr. Sutherland had seen a similar case in a hydrocephalic infant.—A case of Infantilism was shown by Dr. L. A. Clutterbuck. The patient was a girl, aged 13¾ years. She was intelligent but did not know her letters. She was only at school for a year up to about eight years of age. Her height was 3 feet 4½ inches and her weight was 2 stones 6¾ pounds. The breasts were quite undeveloped. There was no history of syphilis or of consanguinity in the parents.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 1st, Dr. Augustus H. Bampton, the President, being in the chair.—Dr. G. Newton Pitt read a paper on the Value of Blood Examinations to the General Practitioner.—Dr. C. H. Melland gave a lantern demonstration illustrative of the Conditions of the Blood in Health and Disease.—Dr. T. Churton showed a case of Anæmia Splenica Infantum.—Dr. T. W. Griffith showed a case of Pernicious Anæmia in which there was Enlargement of the Spleen.—Mr. H. Bailey and Dr. W. H. Maxwell Telling showed a case of Chronic Lymphatic Leukæmia in which there was Massive Enlargement of the Glands all over the body.—Mr. H. Littlewood showed a patient in whom Removal of Malignant Growths occurring simultaneously in the Splenic Flexure and Rectum had been successfully performed.—Dr. A. S. F. Grünbaum showed some Preparations of Spirillum Gallinarum, Piroplasma Canis, and Trypanosomes.——A meeting was held on Feb. 15th, the President being in the chair.—Dr. Telling and Mr. O. C. Gruner communicated a paper on Actinomycosis, with notes of some unusual cases. In one case the disease had affected the back of the hand of a woman, aged 24 years; it was regarded as tuberculous and had resisted surgical and x ray treatment for two years; it readily cleared up on the administration of large doses of iodide of potassium (reaching six drachms a day at one time), combined with daily immersion in baths of hot lotion of biniodide of mercury of strength 1 in 2000. In another case the disease had affected the external and middle ear and the mastoid cells. A radical mastoid operation was performed by Mr. G. Constable Hayes and this, combined with the administration of iodide of potassium, had brought about rapid recovery. Three cases of the disease affecting the abdomen were also described and the clinical and diagnostic features of the disease as it affected the abdominal viscera were discussed.—Mr. B. G. A. Moynihan read a paper entitled "Remarks upon the Treatment of Acute Appendicitis." He drew attention to the occurrence of intestinal peristalsis after the swallowing of fluids. A case was detailed in which an intestinal fistula existed and where it was found that in a period varying from one and a half to three minutes after the drinking of any fluid a peristaltic wave reached the cæcum and was accompanied by the ejection of intestinal contents on to the surface of the abdomen. It was pointed out that water was not absorbed at all from the stomach, having to pass always through the pylorus into the intestine, and so starting a peristaltic wave which travelled through the intestine. Cases were referred to in which milk, or water, was recovered in full from a high jejunal fistula within five minutes of being taken. The importance of peristaltic unrest in disturbing an inflamed appendix was emphasised. To secure rest to the appendix absolute starvation of the patient for several days was necessary; in practice there was rarely any difficulty in carrying out this treatment. But above all in importance in the treatment of acute appendicitis was the necessity of avoiding aperients. Cathartics given in acute appendicitis were responsible for many of the serious complications of the disease; they increased peristalsis and added to the bacterial virulence of the intestinal contents, at that place more particularly where microbic life was most abundant—namely, the ileo-cæcal region. In acute perforative appendicitis a history could almost invariably be obtained which showed that the acute outbreak of the disease was due to an aperient. When peritonitis was profuse an operation should be performed at once and the principles advocated by Dr. J. B. Murphy scrupulously observed. There were rapid removal of the appendix; avoidance of exposure or damage to any intra-abdominal viscus; drainage through the original incision and through a median abdominal incision; the propping up of the patient in the sitting posture, and continuous rectal infusion. A vaginal tube introduced into the rectum was connected with a receptacle, slightly elevated and containing saline fluid warmed by a spirit lamp. Fluid trickled slowly into the rectum and was absorbed at the average rate of one pint an hour. In his own cases from five to 11 pints were given; then the flow was discontinued for an hour or two and restarted, after a turpentine enema if such were needed. Mr. Moynihan had operated by this method upon 15 successive cases, with one death.—Dr. J. B. Hellier showed a Child born without Eyes.—Mr. Michael A. Teale showed a case of Recurrent Transient Proptosis of the Right Eye.—Mr. Littlewood showed a patient who had been operated on for Malignant Disease of the Tongue and the Scrotum occurring simultaneously.—Dr. Telling showed a Thrombus of gradual ante-mortem formation occluding the aortic arch.—Other specimens and cases were also shown by Mr. J. Stewart, Mr. H. Secker Walker, Dr. A. Bronner, Mr. Gruner, Mr. B. Lawford Knaggs, Mr. Hayes, Dr. E. F. Trevelyan, and Dr. L. A. Rowden.

ROYAL ACADEMY OF MEDICINE IN IRELAND.—A meeting of the Section of State Medicine was held on Feb. 8th, Dr. F. C. Martley, the President, being in the chair.—Dr. Thomas Donnelly read a paper on the Report of the Viceregal Commission on the Poor-law. He chiefly dealt with the report as it affected the Poor-law medical service. With regard to the proposal to form a State medical service he said that the representatives of the people did not want it, while the medical profession were divided in their opinion, although not satisfied with their present position, but in his opinion these different views ought to be capable of adjustment. He approved of the proposal to establish county hospitals and smaller district hospitals; the latter he thought ought to be established in every dispensary district, while the county hospitals ought, in his opinion, to have an out-patient department attached to them and be the dispensary for the district. Dr. Donnelly then passed on to the consideration of the salaries of the medical officers in the proposed service, which he thought ought to commence at £200 per annum, rising to £400, with fees and a residence rent-free. The medical officers should be entitled to an annual holiday of one month and retirement after 20 years' service ought to carry with it a pension equal to half the total salary of the medical officer and after the age of 65 years he should be entitled to a pension equal to two-thirds of his total salary. The next point considered in the paper was the board of control, as proposed in the report. This he strongly objected to as likely to raise the greatest opposition to the scheme and advocated instead that all appointments should be in the hands of a committee elected by the county council. As regards entrance to the service Dr. Donnelly thought that all the medical officers ought in addition to their ordinary qualifications to have special certificates in lunacy and obstetrics and to have passed 12 months as locumtenents in the service.—Professor E. J. McWeeney read a paper on the Policy with regard to Tuberculosis outlined in the report of the Viceregal Commission on the Poor-law. He began by referring to the increase of tuberculosis in

Ireland mentioned by the Commissioners in their report. The explanation was no doubt that in Ireland very little was being done and that sporadically, whereas in England, amongst other factors, the efforts of independent, whole-time county medical officers of health produced results which could not be hoped for under the excessively bad system which in Ireland placed the health officer's interest in direct opposition to his duty. The recommendation of the Commission that the disused workhouses should be converted into consumption sanatoriums deserved hearty approval. It was a wise suggestion of the Commission that not only curable but advanced and infective cases should be removed to the contemplated sanatoriums. The removal of such patients from their homes was one of the essential parts of the campaign against the disease but in Ireland it would be objected to if there were not some prospect of recovery held out. By proper classification and rigid observance of regulations he thought that the association of curable and advanced cases in one institution might be rendered unobjectionable. The suggestion of the Commission that consumptive inmates of lunatic asylums should be segregated in a few specially adapted workhouse sanatoriums he regarded as particularly valuable, in view of the great difficulty in rendering such cases non-infective. He thought that county councils should have a free hand in devoting public funds to sanatoriums and not be limited to a rate of 1*d*. in the £ as at present. He looked forward with confidence to the growing-up round the sanatorium of auxiliary institutions, such as volunteer philanthropic committees for providing (1) suitable outdoor or hygienic work for ex-patients so as to prevent relapse, and (2) sustenance for the wives and families of tuberculous working men, so as to secure for the latter while in the sanatorium that peace of mind which was an indispensable factor in the treatment. In Germany this need was supplied by the State invalidity insurance.—Dr. Leonard Kidd, Dr. J. M. S. Kenny, and others took part in the discussion.—The following motion, proposed by Mr. John S. McArdle, was adopted:—

That the Section of State Medicine of the Royal Academy of Medicine in Ireland desire to express its approval of the suggestion contained in the report of the Viceregal Poor-law Commission to convert the entire Poor-law Medical Service in Ireland into a national service, to be paid by the State, to be entered by a competitive examination, the members of such service to be jointly controlled by the central body and the local bodies, and that the medical profession should have one representative on the central body.

HARVEIAN SOCIETY OF LONDON.—A meeting of this society was held on Feb. 14th, Dr. Sidney Phillips, the President, being in the chair.—Mr. Raymond Johnson recorded the case of a man, aged 35 years, in whom Fatal Extravasation of Urine occurred from an ulcerated perforation of the left ureter by an oxalate calculus weighing only eight grains. The only symptoms were an attack of vomiting followed by the signs of a localised inflammation in the left iliac region, which were regarded as due to peritonitis. Operation revealed the presence of an abscess in the retro-peritoneal tissue, containing ammoniacal urine and pus. An attack of severe hæmorrhage from the abscess, which occurred on the following day, so weakened the patient as to prevent further interference and death took place on the fourth day. The abscess was found to extend along the whole length of the left ureter and in the cavity the small stone was found.—Mr. Campbell Williams remarked upon the unique character of the case and pointed out that in the urethra an impacted oxalate of lime stone produced more distress than either a phosphatic or uric acid concretion.—Dr. T. B. Hyslop read a paper on Psychorhythm and Recurrent Psychoses. He dealt with cases characterised by recurrence at fairly constant intervals. The exaggerations of the psychorhythmic process which tended to cross the borderland of insanity might be described as perversions of mind due to: (1) deprivation of the factors pertaining to complete consciousness; and (2) faults in metabolism and toxæmias. In the former group the most interesting cases were those of partial consciousness. In childhood night-terrors or somnambulism might precede a condition in which during the daytime there were moral or volitional perversions of which in the fully awake state there was no memory. The condition of double personality was not well recognised; there were several main groups. In complete alteration the personality of the individual was entirely different in the two states; there was no continuity of thought and the memory of one state was absent during the occurrence of the other. In the partial types the variations might depend on sensory experiences which were different from those habitual to the normal self and there might be new bodily sensations or loss of old ones, and there might be illusions of identity of part or of the whole of the individual. The anæsthetic, hysterical types were those in which the symptoms were mainly hysterical with anæsthesia and temporary amnesia; in these cases there were certain "inhibitions" which prevented the recall or the revival of the former sensations. Reference was made to some of the results of the investigations undertaken by Dr. Lewis C. Bruce upon leucocytosis in insanity.—Dr. F. J. Poynton remarked that insanities alternating with other forms of bodily ailment were conditions of great interest and alluded to a case of recurrent and obstinate psoriasis in which when the rash disappeared the patient became temporarily insane, to recover again when the rash reappeared. He believed that certain observations which he had made with Dr. Alexander Paine and Dr. Gordon M. Holmes might in the future assist in the elucidation of these difficult points. In six cases of fatal chorea, including one of chorea gravidarum, they had found a bacterium in the meninges, or brain, which was identical with that found in rheumatic lesions, and had found in the brain definite, though not gross, changes in the nerve cells. Some, and especially adult, cases of chorea might undoubtedly be temporarily insane.—The President, Dr. J. F. H. Broadbent, and Dr. B. H. Spilsbury also took part in the discussion.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 7th, Dr. W. C. Chaffey, the President, being in the chair.—Dr. A. W. Williams showed a case of Rodent Ulcer successfully treated by the X Rays.—Dr. C. F. Bailey showed a case of Lupus also cured by the X Rays.—Dr. E. Hobhouse showed two cases of Aneurysm of the Aorta, one of the second part of the arch with marked symptoms of pressure on the trachea, there being great dyspnœa; also there was double adductor paralysis of the larynx, which was supposed to be syphilitic in origin and not connected with the aneurysm. The second case had aneurysm of the third part of the arch, with pressure on the left bronchus and paresis of the left vocal cord, also a very small left pulse.—Dr. Walter Broadbent showed a case of Aneurysm of the First Part of the Arch of the Aorta, with pulsation to the right of the sternum and well-marked aneurysmal second sound and diastolic shock but no symptoms; the patient had been under observation for five years. He also showed a man, from whom Dr. F. J. Paley had removed a cerebellar tumour for him four years ago. The patient was blind from post-neuritic optic atrophy, but was otherwise fairly well and was earning a little money by basket making.—Mr. W. A. Bowring showed a fibroid tumour weighing 38 pounds which he had successfully removed. During the operation the right ureter was accidentally divided; he repaired it but a slight uretero-vaginal fistula had remained.—Dr. F. G. Bushnell showed some microscopic specimens of Fat Necrosis and also some pathological specimens.—Dr. Hobhouse opened a discussion on the Use of Alcohol in Medicine. He said that the first question which should present itself was, Would alcohol be of use in this illness, and will it do any harm afterwards? In acute disease alcohol was now regarded as an easily combustible food and therefore useful at critical times when digestion was bad. He thought it was also necessary in the dyspepsia of hard-worked people and in some chronic diseases. It should never be given at the climacteric age since there was then great danger of acquiring the drink habit. It should also not be given for insomnia for the same reason. It was more valuable in old age and should then be more freely used. In rheumatism and gout it should be altogether avoided if possible.—The discussion was continued by the President and by Dr. R. Sanderson, Dr. R. J. Ryle, Dr. L. A. Parry, and Dr. Broadbent.

SOUTH-WEST LONDON MEDICAL SOCIETY.—A meeting of this society was held on Feb. 13th, Dr. M. Mackintosh, the President, being in the chair.—An address was given by Mr. A. H. Tubby on Some Common Deformities of Children occurring in General Practice. Mr. Tubby devoted the chief part of his address to a consideration of the various forms of deformity of the spine. He drew attention to the importance of early diagnosis in spinal caries before the occurrence of deformity; it was invariably preceded by a stage characterised by failure of the

general health and by the "guarded attitude" in which the spine was held; the grunting respiration elicited by placing the child in a prone position across the knees was distinctive and more reliance should be placed on distal or radiating pains than on local pain. Muscular rigidity limited to a few vertebræ preceded the bony rigidity with general contraction of the spinal muscles. It was necessary not to confuse lateral curvature with posterior projection of the spinal processes with a lateral curve due to unilateral caries of the vertebral bodies. In the matter of treatment it was pointed out that the case required a recumbent posture for years rather than months. He had been disappointed with the results of laminectomy for compression paraplegia, finding that recovery followed rest in most cases, while laminectomy was of little value except where pus could be evacuated. He was less inclined than formerly to treat abscesses by incision and drainage, preferring to close the wound and to treat it aseptically. The immediate reduction of spinal deformity by successive stretchings was of value, but owing to the great difficulty, especially in out-patient practice, of obtaining prolonged rest most cases relapsed. The differential diagnosis from rickety kyphosis was alluded to and models and drawings of apparatus were shown with photographs of various types of deformity. In dealing with the causes of lateral curvature attention was drawn to the influence of unequal legs, and the difficulty of diagnosis and treatment in cases of crossed asymmetry was mentioned. The treatment fell under the four headings of rest, exercise, massage, and support. Two schools of treatment had arisen, by exercise and by supports, but in the opinion of Mr. Tubby every case could not be adequately treated by either method. Discretion must be used in the choice of treatment and in some both methods might be combined with advantage. Deformed chests, spasmodic wryneck, and coxa vara were briefly referred to, the importance of prolonged rest in cases of osteotomy for genu valgum was insisted on, while the futility of operating in genu valgum of ligamentous origin was shown. The various forms of flat-foot were discussed and explained, splints and supports of different kinds were shown, and the good result following the excision of an inch of the peroneal tendon in some cases was alluded to.

WIGAN MEDICAL SOCIETY.—A meeting of this society was held on Jan. 15th, Dr. Ferdinand Rees, the President, being in the chair.—Dr. A. E. Hodder read a paper on Pyloric Obstruction.—A discussion followed in which Mr. C. M. Brady, Mr. William Latham, Dr. Blair, Dr. M. Benson, the President, and others took part.—A presentation was then made to the past-President, Dr. Blair.——A clinical meeting was held on Feb. 14th in the Royal Albert Edward Infirmary, Wigan.—Mr. Brady read notes of a case in which he had Sutured the External Popliteal Nerve three years and ten months after division.—The President showed a case in which after the skull had been trephined for Jacksonian epilepsy no lesion was found but the attacks had ceased. The patient was a boy, 13 years of age, and it was now two years since the operation.—Mr. Berry showed a case of Rupture of the Quadriceps Extensor Femoris Muscle at its junction with the patella in a man 50 years of age.—Mr. E. H. Monks showed an Ovarian Cyst which he had removed from the broad ligament.—Dr. R. Prosser White showed cases of Lupus Vulgaris and of Rodent Ulcer.—Mr. Hugh E. Jones and Dr. Harry Holmes showed cases of Excentral Contraction of the Conjunctiva, Zonular Cataract, Chronic Glaucoma, Sloughing Ulcer with Hypopyon, Iritis with Tension, Dislocation of the Lens, and Needling for High Myopia.

NEWCASTLE-ON-TYNE CLINICAL SOCIETY.—A meeting of this society was held on Feb. 7th, Mr. G. Foggin, the President, being in the chair.—The following cases and specimens were exhibited:—The President: (1) A man, aged 27 years, with old-standing Dislocation of the Lens in the Left Eye; (2) Retinal Hæmorrhage in a boy, aged 13 years, the subject of letter blindness; and (3) photographs of cases in the special school for defective-minded children.—Dr. W. E. Alderson: A case of Tertiary Syphilitic Disease of the Tongue in a woman.—Mr. H. B. Angus: (1) Excision of the Knee, followed by irregular growth resulting in marked genu varum; and (2) Contusion of Popliteal Vessels by Fracture of the Femur followed by Gangrene.—Mr. J. W. Leech: (1) Malignant Growth, probably Sarcoma, in the Neck; (2) Tumour in the Groin; (3) Two cases of Tuberculous Dactylitis; (4) Ectopia Vesicæ in an infant; (5) Hypospadias in an infant; (6) Chronic Tumour; and (7) Tuberculous Abscess of the Chest Wall.—Mr. J. Clay: (1) Case of Coxa Vara, with x ray photograph; (2) Ectopic Gestation; and (3) Syphilitic Testicle.—Mr. G. G. Turner: Villous Growths removed from the Bladder, a series of four specimens with illustrative notes. Mr. Turner concluded that as the history of nearly every advanced case of malignant disease of the genito-urinary tract was notable for the occurrence of early neglected hæmorrhage, a single attack of urinary bleeding, if not clearly depending on nephritis, demanded cystoscopic examination.—Dr. A. J. Collis contributed a paper on Some Notes on Circumcision, which led to an interesting discussion on the methods of operation and after-treatment of a surgical procedure characterised as one of the very few still left to the general practitioner.—The Secretary, Mr. Leech, drew the attention of members to the fact that the annual address, on Some Recent Theories of Diet and their Bearings on Practical Medicine, would be delivered on April 4th by Dr. Robert Hutchison of the London Hospital.

Reviews and Notices of Books.

Leçons de Thérapeutique Oculaire, basées sur les Découvertes les Plus Récentes. (*Lectures on Ocular Therapeutics, based on the Most Recent Discoveries.*) By Dr. A. DARIER, formerly President of the Society of Ophthalmology of Paris. Paris: Published at the Bureaux of *La Clinique Ophtalmologique*. 1907. Pp. 400. Price 12fr. 50c.

THIS book is the third edition of Dr. Darier's lectures on ocular therapeutics, the second edition, which was translated into English by Mr. Sydney Stephenson, having been published five years ago. Dr. Darier is one of those enthusiasts who delight in new things. Enthusiasm is ever liable to outrun discretion and Dr. Darier's proves no exception to the rule. He has been wise in the choice of his medium for expounding his views, for the lecture room permits of a freedom of expression and picturesqueness of diction which would be out of place in a text-book. Perhaps the value of the work would have been enhanced by greater restraint and by more judicious utterance. Of the 25 lectures the first 15 are devoted to the discussion of new methods and new drugs, the remaining ten dealing with conjunctivitis, diseases of the cornea, and tuberculous disease of the eye. Diseases of other parts of the eye are referred to incidentally but we gather that they will form the subject of a second volume, as yet unpublished.

The first lecture is introductory, pointing out the "banality and insufficiency" of modern ocular therapeutics, with its "omnipotent triad"—atropine, silver nitrate, and mercury. The second lecture deals with the methods of general therapeutics, especially mercurial medication by the mouth, by inunction, and by hypodermic, intramuscular, and intravenous injection. A brilliant future is prophesied for intravenous injections such as mercury cyanide, biniodide, salicyl-arsenate, and so on. "It is well after a first series of 30 injections to allow a month's rest before resorting to a second or even a third series." In such conditions as interstitial keratitis and choroiditis "it may be necessary to give more than 100 or 200 injections in the course of two or three years." *Toujours l'audace!*

The third and fourth lectures are occupied with a discussion about local medication, especially subconjunctival injections, for which the author expresses "quite a paternal affection." Some space is devoted to explaining the almost negative results of experimental observations on animals. The effects of sodium chloride, cyanide of mercury, sodium salicylate, and other subconjunctival injections are passed in review.

The remaining eleven lectures in the first part of the work are allotted to various applications to the conjunctiva. These are divided according to their action in modifying the

superficial sensibility (anæsthetics), the deep sensibility (analgesics), the vascular tonus (vaso-constrictors and vaso-dilators), the muscular tonus of the iris (mydriatics and miotics), and the conjunctival secretions (caustics, antiseptics, and astringents). The anæsthetics include cocaine, eucaine, tropacocaine, holocaine, stovaine, alypin, and others. The advantages of employing any except the first two mentioned seem to be restricted or even absent. The intraspinal injection of stovaine, which has been used with success in general surgery by Mr. A. E. J. Barker in this country, is discussed, though it appears to have nothing to do with ophthalmology. Alypin is recommended for the removal of foreign bodies from the cornea; we fail to see the advantage which it is said to possess over cocaine. The analgesics are orthoform, acoine, and dionine. Acoine finds its chief use in rendering subconjunctival injections painless. Much space is devoted to dionine, a drug which is undoubtedly of some value but scarcely merits the extravagant praise showered upon it by the author. We have not space to record the diseases in which it is indicated. Amongst the vaso-constrictors adrenalin stands alone. Its value in ophthalmic operations is fully appreciated but we have reason to doubt its efficacy in glaucoma, iritis, scrofulous kerato-conjunctivitis, episcleritis, and other conditions. There is little new in the section devoted to the consideration of mydriatics and miotics, except the enumeration of several of the later synthetic preparations. In treating of the drugs which modify the conjunctival secretions Dr. Darier confines himself almost entirely to the organic compounds of silver—protargol, argyrol, argentamin, argonin, largin, itrol, actol, and collargol. He considers that some of these compounds are as efficacious as silver nitrate, the use of which he has practically abandoned. We are unable to agree with him on this point. It may be admitted that they are less painful and that they do not act upon the epithelium. We are of the opinion that the destruction of the superficial layers of epithelium is an important factor in the utility of silver nitrate in gonorrhœal conjunctivitis, since the imprisoned organisms are cast off with the resulting slough. We are far from denying the value of protargol in lacrymal obstruction, blepharitis, and some other conditions.

We believe that there is much of value in this book and ophthalmologists of mature experience will derive benefit from its perusal. We are, perhaps, too conservative in our methods in England but we think that Dr. Darier would have produced a more trustworthy work if he had paid more attention to his own *obiter dictum*: "*Il faut toujours se mettre en garde contre un trop prompt enthousiasme.*"

The Hygiene of Mind. By T. S. CLOUSTON, M.D. Edin., F.R.S. Edin. London: Methuen and Co. 1906. Pp. 284. Price 7s. 6d.

IN writing "The Hygiene of Mind" Dr. Clouston has made an attempt to put into popular language some of the known facts regarding the development of the mind, so that these facts may be used for the benefit of the race. The aim of the book, as the writer states, is practical and by this standard alone does he wish it to be judged. It is always difficult to treat a scientific subject in a popular manner, as the lay reader must have dogmatic statements and for this reason absolute accuracy must suffer. Dr. Clouston must be congratulated on the result of his labour, for although there are many points with which we should disagree, taken as a whole the book gives a lucid account of the subject. The scheme that he adopts is a very practical one, for after devoting the early chapters to the abstract study of "the hygiene of mind" he passes on to describe mind during its evolution and subsequent decay.

In the first chapter he discusses the scope and aims of mental hygiene and describe the way in which mind has been developed through long stages of evolution. We agree with him that, at any rate from the practical standpoint, the basis of mental hygiene must be the study of the physiological processes of the body so far as these affect the mental functions of the brain. In the next two chapters there is a somewhat cursory description of "The Brain and its Methods of Working." Some of the statements are highly speculative and are liable to mislead the lay reader. For instance, we read that "the colour and qualities of objects and their nearness or distance, the different kinds of sounds and tones, are all printed on the brain as on a book." Some of the sections in the chapter on How the Brain Mechanism Works are good, others are written in almost too popular a style, and a similar criticism may be made regarding the chapter on Principles, Essentials, and Ideals; nevertheless, the author gives many hints which will be very helpful to those whose work is that of training the young. Dr. Clouston goes thoroughly into the question of heredity and gives the views of several recent writers. He sums up the subject by saying, "that we are all agreed in regard to one important conclusion as to heredity—that is, the fact that hereditary defects may occur in two forms—the one is that of definite provable changes from the normal structure and functions of the human body. ..... The other is that defects may occur which are not visible in early life or provable either in bodily structure or functional process, being then only tendencies and potentialities." Dr. Clouston next draws up what he considers to be the ten chief rules of mental hygiene in its relation to heredity and they are certainly valuable axioms and well worth careful study. The reference to social instincts is also good but we notice that the author does not commit himself to any definite ruling as to how to answer those who, with an insane parentage, ask advice as to whether they should marry. He evidently prefers, after pointing out the risks, to leave the decision to his applicants. Mind, Morals, and Will form the subject matter of another chapter in which, among other things, the author endeavours to prove that we must look to the man of science rather than to the moralist or the religionist for the proper understanding of mind, for he evidently feels that he can come to no other decision "if it is the case that all modern investigations done on scientific lines and tested by scientific proofs point to the conclusion that in this world mind is only manifested through brain as its vehicle and is absolutely conditioned in its every form and manifestation by brain action."

In the chapter on the Mental Hygiene of Bodily Disease we read the following statement which we cannot pass unchallenged: "Yet I have seen the most philosophic men ..... full of delusions when the brain was touched by the *microbe* of general paralysis"; we are aware that some authorities favour the microbic theory of general paralysis but surely our present knowledge of the subject is not certain enough to permit of so positive a statement. The warnings that Dr. Clouston gives against the overdoing of games are good, for there is little doubt that the physical exhaustion which is produced in some children by prolonged exertion is very harmful.

The pages that are devoted to the consideration of the Hygiene of Work are ably written and are well worth careful reading. The author strongly urges that the speech faculty in young persons should be more thoroughly developed, as in this way they would not only acquire more accuracy in expressing ideas but the mere fact of better speech would react on the higher centres of the brain and produce keener feelings and greater intelligence. Much emphasis is laid on the importance of attending to the bodily development during the early years of life; education in any technical sense is not recommended before the age of seven. "System, order, and punctuality" should be the rule of the child's life and this should apply to play,

meals, sleep, exercise, and such employment as children can do. The paragraph on backwardness is good but much more might have been said. For example, there are many children who, owing to late development, are backward at school and yet in later years may become able professional or business men. Referring to the more advanced education of women Dr. Clouston writes: "I would merely emphasise the fact that this higher education has often been carried on at the peril of losing something higher still. It must be made compatible with the motherhood of the race!" Later in this same chapter we read that "control is the regulator of the higher faculties and should precede them in time of first appearance." Is this statement true or would it not be more accurate to say that control is an attribute of the higher faculties?

The author strongly urges that hygiene should be taught in all schools and he considers "that the money and time given to teaching music to scholars with no ear and classics to unclassical minds would be infinitely better spent in physiological and health instruction." His views on religious training will find supporters but probably they would not satisfy any theologian, for he rather treats religion from its utilitarian advantages and not as a fundamental faith which begets the attributes which he so well describes. Special sex questions are admirably treated and in the remarks which the author makes on the subject of alcohol he reminds his readers of the recent experiments made by Professor Kraepelin of Munich and others to ascertain the mental effect of alcohol in doses that would be called moderate. Dr. Clouston considers that physical degeneration is largely brought about by city life and the fact that the children have little access to nature. The mind of the town child may be sharp, cunning, and active but his mental horizon is limited and he lacks observation and breadth of knowledge, which the study of nature alone can give. To counteract this deficiency the author urges the passing of an Act to make it compulsory for all municipalities to provide a playground near their houses for every group of 500 children of the industrial classes in our cities.

In conclusion we have no hesitation in recommending "The Hygiene of Mind" to all those who have the welfare of children at heart. Dr. Clouston is a physician of wide experience and in this book he places much of this experience at the disposal of others.

Humaniculture. By HUBERT HIGGINS, M.A. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., late Demonstrator of Anatomy at the University of Cambridge, &c. New York: Frederick A. Stokes Company. 1906. Pp. 255. Price 5*s.* net.

BY the title of this book we are to understand not the culture of "the humanities" but of mankind, and the method to be adopted is set forth in the first section of this work. Indeed, the more correct designation of this part would be "The Science and Art of Eating." The discovery was made not long ago by Mr. Horace Fletcher of the United States that the ill-health from which he suffered on retiring from business was due to incorrect habits of feeding and that his maladies vanished on adopting the practice of chewing his food more completely. As a result of this procedure he found that he was able to do with much less food and also that his palate became more delicate and his appetite more discriminating. It was to elucidate the correctness of Mr. Fletcher's doctrine that Professor Chittenden's well-known experiments were made, and it is claimed as the outcome of these that the old standard of dietary founded on Volt's work is overthrown and that much current physiological teaching is proved to be erroneous. Mr. Higgins is the prophet of the new doctrine of "poltophagy," as it is called. All food is to be chewed till it is rendered thoroughly fluid and tasteless and is to be swallowed in this condition. If only mankind will universally adopt this simple habit most of the ills that flesh is heir to will become extinct. We are quite prepared to admit that most men eat too fast and too much; it is also definitely proved by Chittenden's experiments that men can perform hard work and maintain their weight and condition on a much smaller allowance of food than was formerly believed to be possible. But it has yet to be shown that a diet which suited Mr. Fletcher will suit all the world and that it is beneficial in the long run to exist on the smallest possible allowance of food without any margin for storage of energy or of pabulum to provide against emergencies. There even seem to be dangers ahead in any rash attempt at adopting poltophagous habits, since we read in this book of a man of science who was delighted with his first experiences of the new régime but who became seriously ill as the result of his dietetic discipline. The second part of the book contains a brief account of the history of medical doctrines, with commendation of Bouchard's views on auto-intoxication and some general reflections on hygiene and kindred matters.

LIBRARY TABLE.

Infants' Weight Chart. Designed by R. J. BLACKHAM, Captain, R.A.M.C., L.R.C.P. Edin., L.M. Rotunda, D.P.H. Lond. London: W. H. Bailey and Sons.—This chart is intended for keeping the weekly record of weight of infants during the first year of life. It measures about two feet long by one and a half feet deep and is printed in black and red ink on thin paper. Owing to its somewhat large dimensions it would be necessary to nail it up on the wall of the nursery, as it could hardly be kept in a drawer or in a case. A red line shows the normal increase in weight as estimated by Dr. E. Holt. This curve should act as a useful guide in comparing the actual increments in weight with the normal standard. There is no particularly novel feature about this chart except that it is perhaps larger and more distinct than most varieties with which we are acquainted. Every nursery should be provided with some form of weight chart and that which Captain Blackham has designed will serve excellently to fulfil all ordinary requirements.

The Writers' and Artists' Year-book, 1907. London: Adam and Charles Black. 1907. Pp. 93. Price 1*s.* net.—The multiplicity of year-books is getting somewhat confusing, but doubtless each of them is of use to that class for which it is written. The scope of that now before us is explained by the subtitle which is "A Directory for Professional Writers, Artists, and Photographers." Within its pages will be found information as to various newspapers and magazines with indications of the kind of work with which they respectively deal.

The English Woman's Year-book, 1907. London: Adam and Charles Black. Pp. 405. Price 2*s.* 6*d.* net.—This annual contains a compendium of professions, occupations, sports, and other amusements which are open to women. In this issue are included articles on Women's Suffrage, Co-education, the Civil Service, Domestic Service, and Indexing. As the volume apparently went to press in October there is naturally no mention of domestic servants being included in the new Workmen's Compensation Act.

Hazell's Annual, 1907. Edited by W. PALMER. London: Hazell, Watson, and Viney. 1907. Pp 620. Price 3*s.* 6*d.* net.—Of all the year-books Hazell's is the most retrospective, for though it gives a great deal of information as to our own and foreign countries at the time of going to press yet the body of the book consists of a review of the events of the past year. These are well set out and though many of them deal with burning questions the *résumés*, so far as we have

been able to check them, are written in a perfectly impartial manner.

Herbert Fry's Royal Guide to the London Charities. Forty-third issue. Edited by JOHN LANE. London: Chatto and Windus. 1907. Pp. 383. Price 1s. 6d. *Classified Directory to the Metropolitan Charities for 1907.* Thirty-second annual edition. Edited by W. F. HOWE. London: Longmans, Green, and Co. 1907. Pp. 214. Price 1s.—These two admirable publications give the would-be almsgiver every information as to how he shall dispose of his charity. The Classified Directory issues a table of figures giving the approximate income of the various charities which is most interesting reading. From this table it appears that, including only hospitals, pensions and institutions for the aged, institutions for the supply of food, and institutions for general relief, exclusive of Mansion House funds, the enormous sum of £2,693,362 was collected during the year 1905–06. And yet the daily press is full of harrowing accounts of distress and of appeals for relief, to say nothing of nearly every hospital being in debt or wanting more money. Is distress really so acute or are there waste in, and overlapping of, charitable relief?

JOURNALS AND MAGAZINES.

Annals of Otology, Rhinology, and Laryngology. December, 1906. Fraenkel Festschrift Number.—This number, about three times the usual size of the journal, has been brought out with special reference to the celebration of the jubilee of Professor Fraenkel's connexion with the specialties of rhinology and otology, and it opens with a short article of appreciation in German by Otto Freer. Next follows a review by W. Freudenthal of Fraenkel's life, with a list of his contributions to literature, followed by no less than 53 articles, mostly by well-known Americans, on various diseases of the nose and throat. The first are Diseases of the Trachea, by J. E. Newcomb; Tumours of the Trachea, by C. F. Theisen; and Stenosis of the Trachea, by W. K. Simpson. But the list is too long to quote *in extenso*. There are articles by Logan Turner of Edinburgh, Kelly of Glasgow, and Luc of Paris; Unilateral Nasal Headache, by Wingrave of London; Paraffin Injections, by Walker Downie; a Note on Submucous Resection, by Lake; Statistical Report on Operations for Sarcoma, by Price-Brown of Toronto; Violent Epistaxis in a Gouty Patient, by Trifiletti of Naples; and Nasal Operations, by Baratoux of Paris. These are amongst the contributions from members of the profession residing in various parts of the world. It is a thoroughly representative number and does great credit to the energies of the editors in collecting such a series of papers for such a laudable object as the marking of the great German laryngologist's jubilee in laryngology.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia was held on Feb. 22nd, Sir RICHARD DOUGLAS POWELL, Bart., K.C.V.O., the President, being in the chair.

Communications were received from: (1) Mr. S. F. Cowell reporting proceedings of the Council of the Royal College of Surgeons of England on Feb. 7th; and (2) the Mayor of Douglas, inviting the College to send representatives to the Congress of the Royal Institute of Public Health to be held in that town from June 29th to July 5th next.—It was directed that the letter should lie on the table.

Dr. JOHN SHAW wrote resigning his Membership and returning his diploma.—The resignation was accepted.

The REGISTRAR moved, and the SENIOR CENSOR seconded, the enactment of the following temporary by-law:—

That the Licence of the College withdrawn from Mr. Hugh Stanley Revell on Jan. 26th, 1905, under the provisions of By-law clxxxviii., be restored to him, any by-law to the contrary notwithstanding.

This was agreed to, and the PRESIDENT then dissolved the Comitia.

THE REARING OF CHILDREN.

A LECTURE on the rearing of children was delivered by Dr. George Carpenter at the Institute of Hygiene on Feb. 20th. He commenced by remarking that for a child to have a good start in life he should come of healthy parents, free from any taint of alcoholism or of the many diseases that tend to enfeeble the constitution of the offspring. Such fortunate antecedents were seldom attained in actual practice, but in ordinary circumstances much could be effected by carefully safeguarding maternal health during pregnancy.

In regard to the feeding of infants Dr. Carpenter laid stress on the point that proprietary foods should be altogether avoided and that natural feeding whenever possible should be followed in the earlier stages of life. In those cases in which breast feeding was not available, cows' milk diluted with water should be used and in the second year of life undiluted cows' milk would generally be digested well. Dr. Carpenter made a digression to inveigh in strong terms against the unsatisfactory state of the milk-supply and the inadequacy of the powers possessed by local authorities for dealing with unscrupulous dairymen. He pointed out how difficult it was to arouse the public to a sense of the abuses that prevailed in connexion with the supply of milk. Dirt was responsible for the sacrifice of untold numbers of infant lives, while the health and physique of innumerable other children were seriously undermined not only by dirt in milk but by the wholesale supply of tuberculous milk.

After the second year of life it was advisable to feed children on a varied diet, and the lecturer laid down rules as to the nature of food, the quantity to be taken at a meal, and the times of feeding. Maize porridge was recommended and porridge made from oatmeal, which was richer in proteids than either wheat or barley and greatly to be preferred to any of the prepared "oat foods." He was also in favour of giving fruit and fruit juice at an early age, together with milk puddings, but the fruit must be well cooked and free from fibre, skins, and pips. When children were thirsty water should be given invariably and not milk, which should only be given at meals. The water should be properly filtered and if this were not possible it should be boiled. Drinking between meals should be permitted, but the hours of feeding should always be at the same stated times and the stomach should never be overloaded. A child should not be allowed to be capricious in the matter of food but should be trained to eat any wholesome article of diet. If he did not do so there was certain to be some fault on the part of the nurse or parent. As the infant increased in age the diet should become more generous and varied. At the age of two years meat and fish well minced or pounded might be given for dinner and when meat was well digested the mincing might be omitted. Children should be strictly superintended at their meals and they should not be encouraged in any fanciful habits as regards their food. Dr. Carpenter said that bread containing currants, which was much used nowadays, ought not to be given to children as currants were exceedingly indigestible. Simple sweets in moderate quantities were in no respects harmful, but when children were continually eating sweetstuff the natural inference was that their parents were incapable and foolish.

In order to bring up children properly not only wholesome food but plenty of fresh air was necessary. Dr. Carpenter entered into details regarding the position, size, ventilation, and construction of nurseries, and emphasised the points that no gas-stoves should be employed in such apartments, and that the windows should be sufficiently large to admit plenty of sunlight. The question of clothing was dealt with at some length and it was stated that the day nursery should be kept at a temperature between 60° and 65° F. and the night nursery at about 55° F. Dr. Carpenter insisted upon the necessity of children taking exercise and of walking daily out of doors whatever the weather might be. It was pointed out that healthy games were of great value to children for developing the chest, "improving the wind," and making the muscles hard and elastic. Lastly, he commented upon the effect of bathing, clothing, and education upon the health of children and said that many of life's failures were not so much due to heredity as to environment and the neglect of parents and others to do their duty by them when young. On the other hand, many of life's successes were fashioned in the nursery. The importance of early training, therefore, could hardly be over-estimated.

THE LANCET.

LONDON: SATURDAY, MARCH 2, 1907.

Medical Education and the Examination System.

WE publish this week the address delivered on Feb. 15th by Dr. LAURISTON E. SHAW before the Hunterian Society, forming the annual Hunterian Oration of that society, in which the orator has drawn valuable lessons from the consideration of HUNTER'S career, and none the less valuable because they are so unexpected. For who would have thought that upon the life-story of HUNTER there could be founded a logical denunciation of the examination system? And yet there is much to be said for the view that the methods of HUNTER'S education, or some would say his want of education, were largely responsible for his insatiable curiosity, his practical industry, and his originality of procedure. Our present methods of medical education, in Dr. SHAW'S opinion, bid fair to destroy these qualities in our students, compelling all of them under pain of failure in examinations to work during their most receptive years solely with their eye upon examinations, and so destroying in them many of the characteristics the development of which should be the true outcome of education. Many thoughtful persons engaged directly in medical education hold the same view.

Dr. SHAW'S is a general statement. He does not enter into the vexed question of the length of the different stages of the educational course, or of the actual subjects appropriate to each stage, but the force of his words will be all the better appreciated when we remember how completely our present arrangements for instructing our medical students fail to give satisfaction to many thoughtful persons. Recent debates in the General Medical Council show that the reform of the curriculum is being seriously considered by that body. Whatever examining authority the student looks to for his degrees or diplomas the educational demands now made upon him by the curriculum are such that he finds it essential to spend the statutory five years in close touch with books; he values the instruction that he obtains from his hospital teachers mainly from the point of view of whether it will or will not assist him in an imminent examination. This means that the demands made upon students by their examinations seriously interfere with their clinical studies. The fifth year of the student's curriculum was, as we know, specially designed to be devoted to practice. Book work of all sorts at this stage was to be put behind the student's back. This was the intention of the General Medical Council when the curriculum was lengthened from four to five years, the extra year of study being given for the express purpose of clinical work. But, as a matter of fact, the fifth year has become overloaded with book work intruding upon the practical routine, and reform of some kind is generally felt to be required. The direction which such reform will take must be influenced by the belief or the reverse which is held by the Council in the value of examinations, especially of external examinations, where the students are tested by others than their teachers. It has been suggested that it is the reliance upon external examinations only that makes these tests faulty as well as over-rigorous and it has been proposed by no less an authority than Mr. T. PRIDGIN TEALE, among others, that the different medical schools should examine their own students at any rate in the ancillary sciences. The idea would find favour in Dr. SHAW'S eyes but the Council would probably object to the opening so given for down-grade competition between the schools. Many have insisted that the time has come when all the medical profession should enter through one portal and when two professional examinations only should be necessary before a man can take his place upon the Medical Register. Some educational authorities, taking an exactly opposite view, would have a student's time so divided off that at the end of each year he would be examined in a series of subjects and would not be permitted to go forward with his studies until he had passed such tests in their due order. This means putting a premium on book work and on the employment of "coaches," and we can hardly believe that the General Medical Council is likely to make any alterations in the curriculum that would lead to such a result; but neither can we believe that the Council, all the numberless difficulties being taken into review, is likely, yet at any rate, to look favourably upon the relaxation of the examination system.

Yet the failure of the examination system is to a certain extent proved by several things. The percentage of rejections in medical examinations has steadily increased with the multiplication of examinations; and it is certainly a poor result of education that tests should have so disastrous an outcome. It would seem that the fact of having to get through examinations prevents the students from learning their work from the examination point of view, while depriving them of the time necessary to study from any other point of view. The large part played by the element of chance is a standing argument against the needless increase of examinations. Professor EDGEWORTH, Professor of Political Economy at Oxford, has recorded a number of experiments in the marking of examination papers which have been frequently quoted, as their interest merits. He showed that there are data upon which to found assumptions as to the influence of chance in the results of examinations. In a certain group of examinations he found that the element of chance was such that at any given examination the probability of displacement upon re-examination would amount to one-seventh. When we take into consideration the fact that all candidates for medical examination are not able and not industrious, and that most medical students have now to pass, allowing for subdivisions into subjects, at least six examinations, we can understand how it is that the student's curriculum lasts on the average over six years, although it is only designed by the General Medical Council to cover five years. These facts are only the more suggestive among many, and reflection upon them

has brought it home to the medical profession that our system of medical education requires considerable reform. We ask too much of the medical student; we do not give him the time in which he can fulfil our demands; we run a risk of killing in him the desire to know anything from first-hand experience or to find out anything for himself; we effect these things by filling him with elaborate and temporary information to assist him in his examinations. These things are beyond controversy, so that Dr SHAW'S earnest words are certain of a sympathetic hearing.

Epidemic Cerebro-Spinal Meningitis: Dr. M. H. Gordon's Memorandum to the Local Government Board.

A REPORT on the micrococcus of epidemic cerebro-spinal meningitis and its identification, presented by Dr. M. H. GORDON to the Local Government Board and recently published, contains a most exhaustive account of the organism and of its relation to the disease. Recent observations on the outbreak of the disease in New York and in Germany have uniformly confirmed the brilliant researches of WEICHSELBAUM made so long ago as 1887, and Dr. GORDON states that at the present time it is generally admitted that the diplococcus intracellularis, or, as it is sometimes called, the meningococcus, is certainly the chief and apparently the sole bacteriological factor in epidemic cerebro-spinal meningitis. The characters of the meningococcus as given in the report are as follows. It is an obligatory aerobic organism failing to grow under anaerobic conditions. In primary cultures it grows best upon agar smeared with blood or upon agar containing ascitic fluid. Dr. GORDON recommends a medium originally devised by WASSERMANN for the gonococcus called nutrose ascitic agar, and he states that the appearance of the colonies of the meningococcus upon this medium affords a means of distinguishing them from those of Gram-positive cocci and even from those of some Gram-negative cocci. They form after 24 hours' growth at 37° C. smooth, moist, grey, translucent circular or oval discs with regular outline. The meningococcus grows in milk but does not produce clotting or any alteration in reaction. It also grows feebly on potato. In order to keep up a stock culture on solid media subculture every two days is necessary. Microscopical examination of preparations of cultures shows that the organism occurs as single cocci, as diplococci in small groups, and occasionally in tetrads. A most important fact in regard to its staining reactions is that it invariably gives a negative result with Gram's stain; another character of great value in differentiating it is that it will not grow at a temperature below 25° C. Observations upon animals, notably those of VON LINGELSHEIM in the recent outbreak in Germany, who observed definite meningitis in monkeys after intraspinal injection of the meningococcus, have definitely established the etiological relationship of this organism to the disease. In regard to the manner of its action no soluble toxin has been found in culture media upon which the meningococcus has been grown, wherefore it would appear that its toxin is contained within the coccus itself and is therefore an endotoxin. An agglutinating effect of the serum of patients suffering from the disease upon the organism has been observed and VON LINGELSHEIM in the recent outbreak observed it in 207 cases out of 644 examined. Attempts have been made to utilise this agglutination reaction for the identification of the meningococcus but Dr. GORDON is of opinion that its value for this purpose is small. A further reaction of value in differentiating the organism from other cocci is a fermentation method devised by Dr. GORDON; their action upon media containing various sugars, such as glucose, galactose, maltose, and saccharose, is studied. The distribution of the organism within the body in cases of the disease and its detection in these various sites are considered in some detail in the report. Lumbar puncture affords the readiest method of obtaining the organism, and its recognition in cultures from the spinal fluid is usually easy, since when present it is, as a rule, in pure culture. It can also be obtained from the blood in some cases, and here, again, usually in pure culture. ELSER obtained it in ten instances out of 41 cases of epidemic cerebro-spinal meningitis examined. A great deal of attention has been devoted to the detection of the organism in the upper respiratory passages, but there the matter is of much greater difficulty owing to the occurrence in the same situation of other cocci showing a negative reaction to Gram's stain, so that according to Dr. GORDON many of the statements made in this connexion are untrustworthy owing to this fact having been overlooked. One of the most important of these organisms likely to be confounded with the meningococcus in cultures made from the upper air passages is the micrococcus catarrhalis, but others are known to exist even in normal saliva. The chief means recommended for the differentiation of the meningococcus from these other organisms are the characters of its growth on nutrose ascitic agar, its inability to grow on that medium below 25° C., and its action upon the various carbohydrates. Dr. GORDON'S report is most interesting and forms a very valuable contribution to our knowledge of the organism, while its appearance at the present time is opportune since it will be of use to those concerned in investigating any cases that may arise.

The Conscientious Objector and the Certificate of Exemption from Vaccination.

THE recent debate in the House of Commons and the undertakings given by Mr. BURNS render it clear that we may shortly expect some modification in the existing procedure for securing certificates of exemption. Although we have for some considerable time held the view that the methods adopted by some magistrates towards those applying for certificates are vexatious and likely to foster opposition, there can, on the other hand, be no question that the wholesale granting of certificates without any regard whatever to the circumstances of each case would be a step the consequences of which would not be fully realised until the advent of small-pox and the rush of the antivaccinationists to have their

children vaccinated during panic, and at the time when the Government will probably have an insufficient supply of efficient lymph in store. Vaccine lymph does not, as some people may imagine, retain its potency for ever. The President of the Local Government Board has evinced great interest in the subject of infantile mortality and he is now invited to take a step which would have the effect of rendering a large proportion of infants highly susceptible to small-pox. As practically the Minister of Public Health, what will his action be? Those who have urged modification of the existing system are doubtless anxious to see all forms both of compulsion and persuasion swept away. Doubtless whatever Mr. BURNS proposes will, at least in principle, be accepted. Will he select what may appear to be the line of least resistance by striking off from the statute book every trace of compulsion—will he sever the leash which holds back small-pox from the infant population? Such a course would please a small section of the public and would insure the support of certain Members of Parliament holding peculiar views. On the other hand, it is no exaggeration to say that it would literally astonish the civilised world which is now tending to follow to its logical conclusion JENNER'S discovery and adopting not only compulsory vaccination but also revaccination. Such a step would be regarded as another of the signs of degeneracy with which the scientific and logical German is wont to associate this country. We shall ourselves be much surprised if Mr. BURNS, in response to sectional clamour, yields thus far. His action, or perhaps inaction, up to the present time we have rather attributed to a desire above everything not to encourage the unfit. We may be wrong but we shall retain our opinion for the present.

In the meantime, suggestions are doubtless reaching the central health office from many quarters and amongst them there has, we believe, been a letter from the National Vaccination Officers' Association urging that certificates of exemption should be issued by these officers who are in effect the local administrators of the Vaccination Acts. These officers suggest that they shall hand the certificate to the parent and retain a copy themselves, entering the name and details in their registers and receiving a registration fee therefor. There is something to be said for the proposal. But if it were carried into effect certain conditions must be attached to it unless, as is possible, it is desired to reduce the whole affair to a farce. If the State believes primary vaccination to be of value as a preventive measure against small-pox during childhood it is surely logical and consistent that it should take some trouble to make its advantages appreciated. If, on the other hand, Mr. BURNS does not, after having studied the evidence for and against the subject, believe that it is of any practical value as a preventive measure, let him sweep the whole organisation connected with it away or turn it to other uses. If he elects to do this he must take such consequences as may eventually accrue. If, on the other hand, he is of opinion that vaccination properly performed protects the infants against small-pox he is morally bound, as the head of the central health department, to diffuse this knowledge. He is not entitled by the responsible position which he occupies to sit on the fence in connexion with a public health question of this magnitude. Assuming, therefore, that he will seek the advice of scientific men and will follow it, he will, we imagine, arrange that if the duty of issuing certificates of exemption is to be left to the vaccination officer, such officers shall have a greater inducement to procure vaccination than to produce an exemption certificate, that in all cases a fair statement of the value of vaccination shall be presented to the parent and that whoever issues the certificate of exemption shall be furnished with some declaration which shall be read aloud to the applicant before being signed by him. Such declaration, which in our opinion should only be issued by a magistrate, should bring before the parent the seriousness of the step which is being taken and the risks to life which an attack of small-pox would involve to the child in question. If the State elects to provide gratuitous vaccination, it should also through its registrars issue to the parents some simple leaflets setting forth the reasons why the State affords such facilities.

Conversely, if the State, notwithstanding the testimony of science and of Royal Commissions which it has itself appointed, regards vaccination as useless and dangerous, let it diffuse information through its registrars in this sense. Such a step would furnish but another illustration of the fact that science has no active part or parcel in actual administration and that until this condition of affairs is altered and the Local Government Board is reconstituted on an expert basis the public will continue to be debarred from many of the blessings which the researches of science afford. In the event of this latter course being adopted it will be instructive to note whether the country which gave birth to JENNER and set the example of compulsory vaccination to the world will be followed in its degeneracy by a country such as Germany which, by compulsory vaccination and revaccination, has practically banished small-pox and small-pox hospitals from its midst.

Annotations.

"Ne quid nimis."

LEGISLATION IN REGARD TO BUTTER.

THE Butter and Margarine Bill presented by Sir Edward Strachey, which was ordered by the House of Commons to be printed on Feb. 14th, is intended "to make further provision with respect to the manufacture, importation, and sale of butter and margarine and similar substances." The Bill is calculated to deal the death-blow to the sale of watered butter under the ingenious name of milk-blended butter. It provides for the registration of butter factories in which by way of trade butter is blended, re-worked, or subjected to any other treatment but not so as to cease to be butter. Any premises are similarly to be registered in which there is manufactured any butter substitute (that is to say, any mixture other than margarine, produced by mixing or blending butter with milk, cream, or any substance other than butter) or any imitation butter (that is to say, any article of food which resembles butter, but which is not margarine or a butter substitute) or on which there is carried on the business of a wholesale dealer in butter substitutes or imitation butters. Consignments also of butter substitutes are to be registered

in the same way as are consignments of margarine in accordance with the provisions of Section 7 of the Sale of Food and Drugs Act, 1899. Any officer of the Board of Agriculture and Fisheries is to have power to enter at all reasonable times premises so registered, and an officer of a local authority who is authorised to procure samples under the Sale of Food and Drugs Acts may have similar powers. When the Board of Agriculture and Fisheries has reason to believe that any of the processes of blending, and so on, are carried on in unregistered premises it may appoint an officer and authorise him to inspect such premises. It is thus proposed to repeal Subsection (2) of Section 7 of the Sale of Food and Drugs Act, 1899. If any substance intended to be used for the adulteration of butter is found in any butter factory the occupier of the factory will be deemed guilty of an offence under this Act and if any oil or fat capable of being so used is found it shall be deemed to be intended to be so used, unless the contrary is proved. This provision is obviously meant to avoid the difficulty which the use of certain oils in butter has created in regard to their detection by chemical analysis. It will be an offence under the Act to store butter or margarine containing more than 16 per cent. of water, or to consign from a factory such butter or margarine unless the occupier or consignor proves that the butter or margarine was not made, blended, or re-worked, or treated in the factory. The sale of any butter substitute containing more than 24 per cent. of water will constitute an offence; and in the list of articles the importation of which is an offence under the Sale of Food and Drugs Act, 1899, butter or margarine containing more than 16 per cent. of water, butter substitutes containing more than 24 per cent. of water, or any imitation butter, except in packages conspicuously marked "butter substitute" or "imitation butter," will be included. Regulations are proposed in regard to the proportion of curd in butter. The fines are commensurate with the offences. Thus for a first offence the fine proposed is £20, for a second offence £50, and for any subsequent offence £100, while imprisonment may be inflicted under Section 17 of the Sale of Food and Drugs Act, 1899, in which such punishment is authorised. We have long pleaded for the more effective control by the State over the sale of butter substitutes. Under the name of milk-blended butter the public have been purchasing for a long time, unwittingly it may be, butter containing a very large proportion of water, and water at 1*s.* a pound is a somewhat expensive commodity. Again, under the name of butter, substances have been sold mixed largely with foreign oils the chemical characteristics of which are hardly distinguishable by analysis from those of genuine butter fat, and thus the analyst has been rendered helpless to bring fraud to light. We trust, as it is proposed, that this Act will come into operation on the first day of January, 1908, with but little alteration in the principles which it seeks to apply in the interests of the public. We should indeed like to see its provisions put into practice at an even earlier date.

THE SOUTH AFRICAN EXHIBITION.

ON Feb. 22nd there was a private view of the South African Exhibition which is now being held in the Royal Horticultural Hall, Vincent-square, Westminster, and which was formally opened by Their Majesties the King and Queen on Feb. 23rd. A luncheon was given to the invited guests on Feb. 22nd under the chairmanship of Sir Lewis Michell of Rhodesia, at which speeches dealing with the trade prospects of South Africa were made by, among others, the chairman and Mr. C. du P. Chiappini, the Trade Commissioner for Cape Colony. The four colonies, Cape Colony, Natal, Transvaal and Orange River, and Rhodesia, which make up the British possessions in South Africa, were all well represented at the exhibition, and as this is the first occasion on which the inhabitants of England have had the opportunity to view specimens of the produce and mineral resources of South Africa gathered together in an orderly manner the result should be widely instructive. Much of what is shown has no concern with a medical journal, but the collections of fruit, vegetables, wheat, barley, and arrowroot promise a great agricultural future for the British South African possessions. If they should be capable, as they are stated to be, of supplying this country with such products of excellent quality and in practically unlimited quantities, the comparative failure, as yet, of the mines will tend to become a matter of secondary importance. At the present time, owing to war and other causes, South Africa has not been able to develop her natural resources as a food-producing country. Now that an era of peace seems to have set in the people of these colonies will have the chance to devote their energies to the cultivation and improvement of the land. This means a good deal, for while there can be little doubt that farmers will find a ready market for much of their produce in this country, they will also be able to feed the resident population at reasonable prices and so to render life in South Africa much cheaper and more attractive.

THE PLAGUE RESEARCH LABORATORY IN BOMBAY.

THE report of the Plague Research Laboratory at Parel, Bombay, for the year ending March 31st, 1906, is an official publication of 30 pages, containing also five full-page plates representing laboratory apparatus. Great part of it is devoted to the subject of Haffkine's plague prophylactic; there are also shorter references to surra, Malta fever, and snake venom. In the introductory part of his report Lieutenant-Colonel W. B. Bannerman, I.M.S., the director of the laboratory, states that from April 1st, 1905, to March 31st, 1906, the number of doses of Haffkine's anti-plague vaccine sent out from the laboratory was 316,639, as against 129,507 for the preceding twelvemonth. Of this total quantity, 219,000 doses were supplied to British India, 50,000 to Native Indian States, and 36,000 to East Africa. The first inoculation with this prophylactic vaccine was performed on Mr. Haffkine himself on Jan. 10th, 1897, and from that time to the end of April, 1906, there have been 6,202,371 doses issued from the laboratory. A full account of the method of bottling the prophylactic, together with illustrations of the apparatus, is given in one of the appendices. All inoculators are now instructed to sterilise their syringes and needles by the hot-oil method before commencing operations, and to re-sterilise the needle between each inoculation so as to obviate any possible chance of contamination. A cheap and portable apparatus which can be used for this purpose in the open air has been introduced and has received the name of "Kapadia's lamp," as Senior Assistant Surgeon R. J. Kapadia worked out the details. A great deal of evidence has been supplied by officers of the Indian Medical Service, medical missionaries, and others showing that there was no impairment of the health of inoculated persons and that the vaccine had a marked prophylactic effect, imparting a high degree of immunity against plague for at least eight or nine months. An outbreak of surra among horses of the mounted police afforded an opportunity of studying this animal disease caused by a trypanosome. The infection was easily kept going through monkeys and guinea-pigs by subcutaneous inoculation, but attempts to do this by means of biting flies of the families tabanus and stomoxys have hitherto failed. Guinea-pigs injected with infected blood lived from 50 to 100 days; monkeys infected with guinea-pigs' blood lived on an average 39·1 days. Flies of the genus

stomoxys are recognised to be carriers of a trypanosome disease of horses known in South America as *mal de caderas*, and inquiries made at the instance of Lieutenant-Colonel Bannerman showed that a species of stomoxys was prevalent in Assam and Bombay. As above mentioned, this insect did not appear to be a carrier of surra. The conveyance of trypanosomiasis becomes an important subject in view of the possible introduction of sleeping sickness into India. The collection of snake venom was continued throughout the year, the dried venom being sent to Kasauli for the manufacture of antivenene. The laboratory snakeman was unfortunately bitten on the left forefinger by a Russell's viper, but was immediately treated by Major G. Lamb, I.M.S., with appropriate antivenene which he had himself made at Kasauli. The result was very gratifying, for the man did not develop any constitutional symptoms of poisoning, although the finger became gangrenous and had to be amputated.

EXPLOSIONS IN SEWERS.

ATTENTION is called by the London County Council to a highly dangerous practice of which motor men appear to be sometimes guilty—namely, that of allowing inflammable naphtha or petrol to escape down the drains. The County Council has issued a timely warning on this subject to persons concerned in th use of petrol. It is pointed out that on several occasions recently explosions have occurred in sewers in which men were working and that life has been lost thereby. The explosions have been traced to the presence of highly inflammable gas in the sewer given off by light petroleum. Under Section 10 of the London County Council (General Powers) Act, 1894, there is an order prohibiting the disposal of inflammable petroleum products in this way, and any offence committed is punishable by a fine not exceeding £20, with an additional fine not exceeding £5 for every day on which the offence continues. In our opinion the fine should be very much heavier considering how very serious the results of such reckless conduct may be. Apart from the danger to life involved, an explosion may rupture the sewer and along its course the result may be a serious pollution of the subsoil.

SUICIDE IN ITALY.

"FOLLOWING up the comments in THE LANCET[1] on 'Suicide and its Methods,'" writes an Italian contributor, "I may now supplement them by the last statistical returns issued on the subject by the Direzione Generale della Statistica. These returns deal with the year 1904 and are full of interest as painful as it is dramatic. Self-murder, it appears, was on the increase in Italy from 1887 to 1898, after which period a slight diminution was noted up to 1903. The cases of suicide in 1887 were 1449, those in 1898 were 2059, while those in 1903 were 1922. But in 1904 the cases amounted to 2156! Of this appalling total, Lombardy contributes the largest number, 337. Next comes Piedmont with 297, the Emilia with 236, Venetia with 224, Tuscany with 210, Sicily with 163, Latium with 132, Liguria with 116, and Campania with 110. In the other provinces of Italy the number of suicides were, in each instance, below 100—the lowest number being in the Basilicata, 19. Classified according to sex, of the 2156 individuals who put themselves to death in 1904 the males numbered 1705 and the females 451. As to the 'stato civile' (condition as citizens), 963 of the suicides were bachelors or spinsters, 888 were married, 250 were in the widowed state, and 55 were of unknown civil condition. The great majority of the suicides occurred between the ages of 20 and 39 years. Between those periods of life the cases were 877; 700 made away with themselves between the ages of 40 and 50; 380 between 60 and 79; 150 between 15 and 19; 28 at ages above 80; and 12 under ten years old. Touching the means of self-murder employed, that by fire-arms was the most frequent, numbering 522 cases; drowning was the means in 433 cases; hanging in 388; precipitation from a height in 213; poison in 188; asphyxia in 98; cutting instruments in 68; and crushing under vehicles in 61. As to the mental state of the suicides 'delirio per psicopatia' (frenzy due to psychical causes) figures largely, two under that head being ascribed to alcoholism, ten to the mania consequent on pellagra, and seven to neurasthenia. Of the four seasons the spring was the most prolific in suicide, numbering 640 cases; summer follows with 610, winter with 463, and autumn with 443. The months of April, May, June, and July witnessed the largest number of suicides; October, November, and December the smallest. Classified according to occupation in life the most numerous were those of the agricultural, pastoral, or artisan class, 452. Next, but at a long interval, come the well-to-do (capitalists and such like), numbering 86; and officers (combatant in either service), 77. Of the liberal professions those of the Church and medicine figure least, there being seven among the former and nine among the latter."

[1] THE LANCET, August 4th, 1906, p. 311.

NEW VIEWS ON PATHOGENIC MYCOLOGY.

Dr. P. I. Koubassoff (a Russian physician) has set himself the formidable task of disproving the fundamental conceptions of modern mycology and epidemiology.[1] From his observations on malarial and typhoid fever made during a 12 years' stay in Turkestan he concludes that "the life cycle of the pathogenic microbes evolves through the following stages: a growth of the nature of a mycelium sprouts from a hibernating spore, as a bush (*buisson*) from its seed and its diverse constituents (*parties*) develop gradually into a monosporium, a penicillium, an aspergillus, ascospores, bacteriogenetic spores, and facultative spores that turn again into hibernating spores, thus resuming the life cycle. ..... The spores, more particularly the hibernating modification, are the real carriers of infection; the microbes, thought specific hitherto, as, e.g., bac. typh. Eberth, are mere 'promycelia.' They are too little resistant to form a pathogenic factor of any degree of importance. Their presence in the blood is possible only after the resistance of the organism has broken down." There is, unfortunately, in the array of observations practically nothing to support these statements. The animal experiments with the microbe of paludism (malaria) and the "microbe of typhoid fever" are little convincing and nothing is done to prove evolution of one of the forms into another by way of culture. Dr. Koubassoff states that he has succeeded in isolating most of the forms described by him from the blood of patients by diluting the blood drawn during the different stages of malaria, typhoid fever, and even pneumonia, with physiological saline solution, and growing them on the following media: Medium I.: To a kilogramme of broth: glycerine, 60·0; peptone, 12·0; ferratin (an iron albuminate), 1·2; glucose, 4·0; and sodium chloride, 4·0. From 7 to 10 per cent. of gelatin is added for a gelatin medium, and for agar from 2 to 3 per cent. of gelatin and 1 per cent. of agar-agar. Medium II.: An entire egg beaten up with a tablespoonful of glycerine and one glass of skimmed milk. On sterilisation this forms a very soft semi-solid medium. The forms thus obtained are identical with forms which were isolated from the green film

[1] Du Microbe de la Fièvre Typhoïde (Ileo-typhus) et de la Théorie Ternaire de Pettenkofer. Des Microbes du Paludisme: Recherches Microbiologiques, Epidémiologiques, et Cliniques. Print. by I. N. Kouchnereff, Moscow, 1906. Des Champignons du Paludisme, 1895. Ueber die Pilze des Paludismus, A. Hirschwald, Berlin, 1898.

on stagnant waters, cesspools, marshes, and so on. In their present state the publications add nothing to that part of science which they are meant to revolutionise, in spite of the numerous excellent microphotographs.

THE DEATH OF HENRI MOISSAN.

DEATH would appear to be ruthlessly active in the ranks of chemical science. Curie, Mendeléeff, and Menschutkin have been taken away comparatively recently, and now the scientific world is the poorer for the loss of M. Henri Moissan, the first to isolate fluorine in the free state and the first also to produce artificial diamonds on any scale. M. Moissan was 54 years of age and he died on Feb. 20th after having undergone an operation for appendicitis. It was in 1886 that M. Moissan succeeded in isolating fluorine by the electrolysis of fluoride in a platinum tube closed with stoppers of fluor spar. Fluorine proved to be a pale green gas which has a powerful action on almost all known substances. In 1906 M. Moissan was awarded the Nobel prize in acknowledgment of the remarkable results which he obtained in his high-temperature experiments, using for the purpose the intense heat of the electric arc. These experiments led the way to the commercial production of calcium carbide (and thus indirectly of the marvellous illuminating gas acetylene), aluminium, and metallic calcium. The temperature reached was oftentimes near to 7000° F. M. Moissan by means of this intense heat fused iron together with carbon and then suddenly cooled the mass. The effect produced enormous pressure within, the outer part solidifying, and on fracturing the solid material it was found that part of the carbon had crystallised into diamonds. They were microscopic in size but still they were undoubtedly diamonds. Similar crystals are occasionally found in the steel and slag produced in the furnaces of iron foundries. M. Moissan was a most indefatigable worker in the field of chemical research, a fact which gained for chemistry some new and valuable results and his death at a comparatively early age will very generally be regretted.

ANKYLOSTOMIASIS IN BELGIUM.

Consul-General Sir Cecil Hertslet has issued a most interesting report[1] upon ankylostomiasis and the means taken to combat this disease in Belgium. The report opens with a lucid account of the nature of the disease and of the manner of its spread and then goes on to detail the steps which the Belgian Government took to combat the evil. About three years ago a commission was appointed which reported that in the Liége district alone some 25 per cent. of the miners were infected. In November, 1904, a Royal decree promulgated certain rules for the district of Liége. The mines were divided into two classes, those infected and those not infected or at least which were considered to be only slightly infected and which should be able to furnish a clean bill of health within six months from the passing of the decree. In this latter class notification of any case of ankylostomiasis was required. With regard to the former class proper closet accommodation of at least one closet for every 25 workers had to be provided at the pit's mouth and buckets with watertight linings and tight-fitting covers had to be provided for below ground. Stringent rules were drawn up for the keeping of both closets and buckets clean. All miners undergo a clinical and bacteriological examination. If found infected they are not to work. While off work, however, they are paid a sum amounting to about 17*s.* per week, which is provided partly by the provincial authorities and partly by the mine-owners. Cards containing simple rules of hygiene were issued to miners, but these rules, says Sir Cecil Hertslet, though good in theory, were in practice found to be somewhat impracticable. Other cards were issued to mine-owners. As regards treatment, the drugs chiefly used were male fern, salicylic acid, and eucalyptus with castor oil. Of these three mixtures that containing eucalyptus seems most popular and quite as efficacious as the others. As a result of these measures the following figures show very well the progress made in the fight against the disease. In 1902 in 16 mines in the province of *Liége* the percentage of miners affected was 29·5; in 1904 it was only 12·25. By the beginning of this year five of the mines were reported as free from the disease. Although the law was at first made applicable to the province of Liége only it has now been applied to the province of Hainaut also.

[1] Report on the Precautions Taken to Combat Ankylostomiasis (Miners' Worm Disease) in Belgium. No. 656 Miscellaneous Series of Diplomatic and Consular Reports published by the Foreign Office.

HALTING PLACES FOR THE MOTOR OMNIBUS.

SOME years ago we suggested in these columns that many accidents in the street might be avoided if the omnibuses had definite stopping places along the route, besides which the labour and strain of pulling up and re-starting the horses would be minimised. Out of kindness and consideration for the horses not a few persons have sustained an unpleasant, if not serious, accident by refusing to have the omnibus "pulled up" when they wished to dismount; others have had no consideration at all and have consequently always alighted in safety. There is no reason why anybody should be exposed to the risk entailed by jumping on or off an omnibus while it is in motion. If there were definite calling places no such risk would be involved at all. If this is the case with the horse-drawn omnibus, how much more so is it with the motor omnibus. It is, in fact, only the absolutely sturdy person, sound in nerve, wind, and limb, who dares to jump on or off a motor omnibus while it is careering along. The pace of these vehicles renders it a highly dangerous proceeding for almost anyone to attempt to alight from them whilst in motion, and an attempt to jump on is just as likely to result in an accident. We are aware that there are places in the streets where by some unwritten law omnibuses are required to stop but as a rule these stations are too far apart and too irregular to be generally useful, and even then it is not everybody—and certainly it is not strangers in the metropolis—who know of their existence. As a matter of fact, these halting places do not exist for the convenience of the public as patrons of the omnibus, but merely so that the traffic at busy corners and crossings shall not be impeded by these vehicles stopping there. The system which we suggest is in vogue on most tramways and now that the motor omnibus is as fast as the electric tramcar it should be subjected, it seems to us, to the same regulations for the convenience and safety of the public.

THE THEOBROMINE CLASS OF DIURETICS.

Dr. F. Zernik, who has contributed largely to our knowledge of the composition of proprietary medicines, has published in the *Apotheker Zeitung*, 1906, p. 898, the results of his analysis of the various theobromine derivatives which have been placed before the profession as diuretics. Theobromine itself has been recommended as a diuretic; it is considered superior to caffeine owing to its relatively slight action on the central nervous system. Theobromine is only slightly soluble in water; it forms a soluble compound with sodium hydroxide, having so marked an alkaline reaction that it is not suitable for therapeutic use. Hence various attempts have been made to produce soluble compounds of theobromine suitable for administration. These include agurin, a compound of theobromine-soda and sodium acetate; diuretin,

a combination of theobromine-soda with sodium salicylate; barutin, prepared from theobromine, baryta, and sodium salicylate; theophorin, composed of theobromine-soda and formic acid; theobromose, a combination of theobromine and lithium; urocitral, prepared from theobromine-soda and sodium citrate; and uropherin, a compound of theobromine and lithium, with lithium benzoate or salicylate. The following table gives the doses of some of these compounds and their theobromine content.

—	Dose.	Percentage of theobromine.
Agurin...	15 grains three times a day.	58·1
Barutin	3 to 8 grains frequently.	25·5
Diuretin	7 to 15 „ „	49·7
Theophorin ...	15 grains three times a day.	62·5
Urocitral	7 to 15 grains three times a day.	52·2

Theophorin is the newest of these compounds; experiments on animals have shown that it combines the diuretic properties of theobromine with the tonic properties of sodium formate.

THE DUTTON MEMORIAL.

THE late Dr. Joseph Everett Dutton died, as our readers will remember, at Kasongo, on the Congo, aged 29 years, on Feb. 27th, 1905, from tick fever. Together with his colleague, Dr. J. L. Todd, he contracted the disease while engaged in its study. Both had apparently recovered by Feb. 9th, but Dr. Dutton had a relapse which proved fatal. He had done much excellent work in Africa, and in 1901 had identified the trypanosoma Gambiense, afterwards recognised as the cause of sleeping sickness. It is now proposed to endow a Research Professorship in Tropical Medicine at the Liverpool School of Tropical Medicine as a memorial of Dr. Dutton's life and work. The professorship is to be made a permanency and the income necessary for its maintenance will be supplied by the interest on trust funds. For this object a sum of £10,000 is required. Subscriptions may be sent to Mr. A. H. Milne, Honorary Secretary, Liverpool School of Tropical Medicine, Liverpool. The object is a worthy one and there is no need for us to insist upon the benefits which research into tropical medicine may bring forth. The results already obtained in the cases of malaria and yellow fever are sufficient answer to those who think that money spent on research is wasted.

THE HARVEST OF THE SEA.

FROM the *Fish Trades Gazette* we gather that some discord has arisen amongst the organisations concerned in fishery research over the question of the allotment of Treasury money in aid of this scientific work. It is alleged that the Marine Biological Association of Plymouth has so far alone enjoyed this financial aid which amounts to a considerable sum, and the trade submit that this association is a purely scientific body which is not in touch with either the trade or the various bodies concerned with fishery legislation and administration. A week or so ago a deputation from the Lancashire and Western Sea Fishery Committee (whose excellent work was referred to in a leading article in THE LANCET of Feb. 2nd) waited upon the Chancellor of the Exchequer at the House of Commons with a view of soliciting assistance from the Treasury in aid of its scientific work. It appears that the Lancashire organisation has supported its own researches out of the local rates, and at the same time the members have contributed to the cost of researches on the East and South Coasts by means of taxes. It was now thought that in future any Treasury grant should not be made to any irresponsible body but directly to the central fishery authority—viz., the Board of Agriculture and Fisheries. In a conciliatory reply Mr. Asquith said that he had come very definitely to the conclusion that the time had arrived for a thorough investigation of the whole question by an independent and a competent authority. Whatever financial arrangements were made during the present year would be of a strictly provisional kind and it was his intention to bring together as soon as possible by means of an inquiry all the various sources of information which were available in order to see if some definite scheme could not be arranged to coördinate local and general effort on this most important economic question. We can hardly think that the members of the trade are foolish enough to underrate the value of scientific work, but, of course, on the great questions at issue it is important that practical results should sooner or later be forthcoming. It is to be hoped that all sides will agree on this matter and heartily coöperate in the great work in hand, the consummation of which is to bring good to all concerned. We have no doubt that the Chancellor of the Exchequer will not be long in arriving at an equitable scheme by which research will be encouraged and supported in a broad direction.

INFANT LIFE PROTECTION.

A BILL to amend the Infant Life Protection Act of 1897 has been introduced into the House of Commons by Mr. Staveley Hill, supported by, amongst others, Sir John Kennaway and Mr. Ramsay Macdonald. The Act of 1897 dealt with nurse children under five years of age only in cases where more than one was taken by the baby farmer, or in the case of a child under two years of age only where a sum of money not exceeding £20 was paid down. Furthermore, the local authority could only remove the child from the baby farmer's premises if the said child's health were endangered either by reason of the house being insanitary or the person who had the child in his or her care being ignorant or negligent. The object of the new Bill is, amongst others, to extend the provisions of the Act to cases where only one child is taken in to be nursed or maintained and to any child received in consideration of a sum of money paid down, whatever the amount may be; to raise to seven years the age limit of children within the Act; to enable the local authority to remove an infant kept by a person who is unfit by reason of character or otherwise to have his or her care and maintenance, or who is in a house or premises unsuitable for the purpose, although such person or premises are not so unfit as to endanger the child's health; and to require notice to be given of all changes of residence of a person having the care or custody of children within the Act under penalty of imprisonment or fine. We are quite in sympathy with the objects of this Bill, especially in so far as it applies to cases where only one child is taken or to cases in which any sum of money is paid down. With regard to the question of the local authority removing children from unsuitable houses this in many instances will be a much needed reform but we do not envy the local authority its task of deciding whether or not a house or person is unsuitable from a moral point of view.

A MEDICAL INFORMATION OFFICE IN BERLIN.

FOR some years an office at which medical information as to hospitals, lectures, and other subjects of interest to medical men can be obtained has been at work in Paris, and a full description of it appeared in THE LANCET of Jan. 17th, 1903, p. 207. We now learn that a somewhat similar institution is about to be opened in Berlin at the Kaiserin Friedrich-Haus (Luisenplatz 2-4). The aim of the institution is to assist foreign physicians who go to Berlin to study. Information is to be given regarding all lectures,

both those to which admission is free and those for admission to which a fee is charged. Particulars can also be obtained as to hospitals and other medical institutions, and at what times and under what conditions they may be visited. Finally, information can be obtained as to lectures at the various clinics or medical societies and as to opportunities for watching operations in both clinics and hospitals. All information will be given free of charge. We are glad to be able to lay this information before our readers and we owe it to the courtesy of Professor Dr. Kutner, the director of the Kaiserin Friedrich-Haus, that we are able to do so. The new Information Office, however, is not the first of the kind in Berlin, for a similar one was opened in connexion with the University at the commencement of 1905 and a note upon it from our Berlin correspondent appeared in THE LANCET of Jan. 14th of that year. Such institutions as the Paris Bureau de Renseignements Médicals, and that already existing and that about to be opened in Berlin, are essential to any medical man desirous of studying in a foreign town if he is not to waste a large portion of the time which he can afford to devote to study away from home, and such period is often very limited.

THE PERCENTAGE OF PHOSPHORUS IN VARIOUS FOODS.

M. Balland has published in the *Journal de Pharmacie et de Chimie* for January a series of determinations of the amount of phosphorus present in various foodstuffs. The determinations were made on the actual food and not on the ash obtained by their ignition. The percentages of phosphorus, expressed as phosphorus pentoxide (P_2O_5), are as follows: Wheat (except Australian wheat) and oats, 0·65 to 1·11; maize, millet, barley, and rice, up to 0·8; carrots, cabbages, turnips, and onions, 0·1; asparagus ends, cauliflower, lettuce, and leeks, 0·18; potatoes, 0·29; truffles, 0·5; peas, 0·6 to 1·0; haricot beans and lentils, to 1·35; beans, 1·45; cherries, currants, strawberries, oranges, pears, and grapes, to 0·1; dried figs, dates, and bananas, to 0·3; almonds and dried nuts, to 0·9; beef, veal, mutton, and fowl, to 0·45; fish, to 0·6; snails, oysters, and mussels, 0·26 to 0·35; cheese—Gruyère 1·81, Dutch 1·62, Camembert 1·1, average 0·68 to 1·81; roasted coffee, 0·4; cocoa, to 1·3; chocolate and milk (beverage), 0·62; hen's eggs, 0·26; white of egg, 0·015; butter, 0·13; and cod-liver oil, 0·05. M. Balland deplores the craze for fine white flour. Year by year in response to the demand of the consumer, machinery is perfected for producing still finer flour, containing, as a consequence, still less phosphorus and nitrogen.

HENRY VIII.'S BARBER.

THE origin of Saturday night tubbing seems to be lost in the mists of antiquity. According to Mr. Sidney Young, F.S.A., author of the "Annals of the Barber Surgeons," who on Feb. 23rd delivered a most erudite and amusing discourse at Barbers' Hall on the Relations Anciently Existing between Barbers and Surgeons, it was the custom of no less a person than King Henry VIII. to perform partial ablutions on occasional Saturday evenings. The "King's barber," one John Pen, Penn, or Penne, an ancestor of the famous Quaker of that name, was expected to be present at these august ceremonies, when the Defender of the Faith was pleased "to cleanse his head, legs, or feet." The regulation requiring the barber's attendance was a standing order, dating apparently from the reign of Edward IV. It is preserved in the "Liber Niger Domus Regis" (Harl. MS., 642), and its wording seems to imply that the solemn washings were partial and special rather than thorough, and that the king's majesty often did without them. The royal barber, who was also a groom of the privy chamber and one of the 15 persons allowed to enter it, was also required to shave the king daily, "having in readiness his water, basons, knives, combs, scissours, and such other stuffe as to his roome doth appertaine for trimming and dressing of the king's head and beard." He was further required to "take a special regard to the pure and clean keeping of his own person and apparel, using himself always honestly in his conversation without resorting to the company of vile persons," and so on. Thus we have the beginnings of asepsis. When he was shaving the king a knight of the chamber or squire of the body, or both, were required to be present in order to prevent foul play. The portrait of Pen figures prominently in Holbein's famous picture of Henry VIII. delivering a charter to the barbers and surgeons on the occasion of their union in one body. The face is so fine in itself and so well painted that the great Sir Robert Peel was said to have offered the Barbers' Corporation £2000 if it would allow him to have it cut out and replaced by a copy. He is further reported to have said that he should like to sleep on the Barbers' dining table and to gaze on awakening at his favourite Pen. The table, as its form plainly shows, is an ancient dissecting table, whither were carried the corpses of malefactors handed over at Tyburn before 1745 to the barber-surgeons. There can be no doubt about the use to which the table was put, but, as Mr. Sidney Young informed his hearers, the anecdote touching Sir Robert Peel is pure myth.

EPIDEMIC CEREBRO-SPINAL FEVER.

THE epidemic of cerebro-spinal fever continues to make steady progress. Two cases have now occurred in London during the present week, one in Stepney and one in University College Hospital, the last-mentioned patient being a man, aged 28 years, who was admitted on Feb. 19th and died on the 25th. The source of his infection has not been traced and there are not as yet any signs of an extension of the disease from this centre. In Glasgow 14 fresh cases were notified and 17 deaths occurred on Feb. 24th, 25th, and 26th. Up to the present time there have been 248 cases in Glasgow with 142 deaths. In Belfast six cases were notified on Feb. 22nd and five deaths occurred on Feb. 25th and 26th; according to the latest returns there have been in all 118 cases with 71 deaths. In Dublin one fresh case was notified on Feb. 26th, making the eleventh in that city; there have been eight deaths, and three patients remain under treatment. In England fresh cases of the disease have been found in Leicester, Gravesend, Chelmsford, and Handsworth. In Scotland isolated cases have occurred in Borrowstounness, Kilsyth, Grangepans, Loanhead, and Peebles. In Ireland there have also been isolated cases at Greencastle, Ballymoney, Newry, and Sheeptown.

THE WORTHLESSNESS OF LIQUID PREPARATIONS CONTAINING MORE THAN ONE DIGESTIVE FERMENT.

LIQUID preparations containing more than one digestive ferment—e.g., pancreatin (trypsin) and pepsin—have recently been put before the profession without regard to the fact that the ferments are mutually incompatible in solution. The worthlessness of such preparations has been proved by Dr. Torald Sollmann and emphasised in a special report of the Council on Pharmacy and Chemistry of the American Medical Association, which was published in the *Journal of the American Medical Association* of Feb. 2nd. Dr. Sollmann has found that trypsin is destroyed in six hours at 40° C. in a solution containing 0·56 per cent. of hydrochloric acid without pepsin, or 0·112 per cent. hydrochloric acid in addition

to pepsin. Pepsin is completely destroyed by trypsin in alkaline solution and almost entirely so by 0·01 per cent. of sodium hydroxide. Diastase is rendered inactive in nine hours by 0·1 per cent. of sodium hydroxide, it is almost entirely destroyed by 0·009 per cent. of hydrochloric acid—i.e., in a solution containing one-twentieth the acidity of the gastric juice—and its activity is weakened by pepsin even in neutral solution. But diastase is not affected by trypsin, rennin is not destroyed by pepsin, and invertin is not injured by pepsin, trypsin, or diastase. These laboratory results will doubtless give such therapeutic monstrosities their quietus. There is no place in medicine for them. One of these preparations is said to contain "the five active agents of digestion, pepsin, 'veg.' (*sic*) ptyalin, pancreatin, lactic and hydrochloric acids," and it is stated to be "superior to all other remedies in dyspepsia and diseases arising from imperfect digestion." But on examination it was not possible to establish the presence of either the proteolytic or the amylolytic ferment. Another elixir—"the only true digestant, because it contains the enzymes of all the glands which are necessary for digestion"—was found to possess no enzyme activity whatever.

AN INTERNATIONAL CONGRESS ON PSYCHIATRY, NEUROLOGY, PSYCHOLOGY, AND THE NURSING OF LUNATICS.

A CONGRESS under this comprehensive title will be held at Amsterdam from Sept. 2nd to 7th, 1907. The congress is under the patronage of Queen Wilhelmina and Prince Hendrik of the Netherlands, and the honorary presidents are the Dutch Minister for Home Affairs, the Minister of Justice, the Commissary of the Queen in the province of North Holland, and the Burgomaster of Amsterdam. Dr. G. Jelgersma, professor of psychiatry and neurology at the University of Leyden, is the president, and Dr. W. P. Ruijsch, chief inspector of public health at the Hague, is the vice-president. There are a large "Propaganda Committee for the Netherlands" and a widely distributed "International Propaganda Committee." The congress will consist of four sections: (1) Psychiatry and Neurology (President, Dr. C. Winkler of Amsterdam); (2) Psychology and Psycho-physics (President, Dr. G. Heijmans of Groningen); (3) Nursing of Lunatics (President, Dr. W. P. Ruijsch of the Hague); and (4) Exhibition (President, Dr. J. van Deventer, senior, of Amsterdam). The congress will consist of general sessions and meetings of sections. In the general sessions chosen subjects will be dealt with by specially invited speakers. At the meetings of sections special questions will be discussed and criticism will be invited. Any one taking an interest in the subjects of the congress may become a member thereof. The languages employed will be English, French, and German. Members who will treat any suitable subject are requested to send a synopsis before May 1st to the secretary, who will see to the translation, printing, and distribution thereof. Those wishing to attend the congress are requested to sign a special card which will be sent by the secretary and to return it with their visiting card and cheque for 16*s.* 8*d.* to him. Tickets admitting ladies accompanying members may be obtained at 8*s.* 4*d.* each. A more detailed programme will be issued shortly. The general secretary is Dr. G. A. M. van Wayenburg, Prinsengracht, 717, Amsterdam.

EPIDEMIC DIARRHŒA IN GORTON.

Mr. A. W. Martin, the medical officer of health of the urban district of Gorton, in a special report to the Local Government Board on the prevalence of diarrhœa in that district during the summer and autumn months of 1906, states that from July 13th to Oct. 25th there were 75 registered deaths from diarrhœa, 38 being males and 37 females. Of these deaths 54 were in children under 12 months of age and 67 out of the total 75 were under two years of age. Of the 54 deaths of children under one year of age 42 were bottle-fed. Four had been breast-fed, but when taken ill were having other food. Five were exclusively breast-fed and in three cases no information could be obtained. Of the 51 deaths concerning which information was obtainable, 35 mothers had attempted breast-feeding and 26 of these had failed, while only nine had been able to suckle their children for the full term. Of the total 75 deaths 60 occurred in houses supplied with privy middens and 15 in those supplied with water-closets, the rate per 1000 being 15 deaths per 1000 privies and 3·8 per 1000 water-closets. These figures show that two factors are principally concerned in the spread of the disease. The one, of course, is the privy midden system and the other the absence of breast feeding. Mr. Martin considers that "the present generation is witnessing an occurrence in the evolution of man probably never experienced by the human race previously, and that is *a race of breastless women*." That organs unused do atrophy is a canon of physiology, and it may be that the disinclination or inability of the modern woman to suckle her child, the inability being from social conditions, is leading to a real inability from atrophy of the mammary glands. To this cause may be due the enormous number of quack advertisements which disfigure the pages of popular magazines and which pretend to offer nostrums able to increase the size of the mammary glands. Whatever be the cause, the question of how children are to be breast-fed is one which demands the most serious attention of those concerned for the progress of the country, and although the matter is being taken in hand in many places a true solution of the problem seems as yet far distant.

THE Society of Tropical Medicine and Hygiene was formed on Jan. 4th of this year at a meeting held at the Colonial Office for the purpose of the study and discussion of diseases met with in tropical countries. The second meeting of the society will be held on Friday, March 15th, at 5.30 P.M., at the Royal College of Physicians of London, to consider the rules drawn up by a sub-committee for the constitution of the society and the regulation of its work. So much has been done in recent years to advance the knowledge of the diseases of warm climates that there must be ample food for discussion and study in this branch of medicine, and the meetings of the society should prove interesting not only to medical men with tropical experience but to every medical man engaged in the practice of medicine wherever his lot may be cast.

AT a meeting of the Harveian Society of London on Thursday, March 7th, at 8.30 P.M., Mr. W. Watson Cheyne, F.R.S., will open a discussion on the Diagnosis and Treatment of Fractures in the Neighbourhood of a Joint, and will illustrate his remarks with skiagraphs. The following have promised to speak: Professor Howard Marsh, Mr. Edmund Owen, Mr. A. Pearce Gould, Mr. W. Arbuthnot Lane, Mr. Robert Jones (Liverpool), and Mr. J. Lynn Thomas (Cardiff). Members of the medical profession are invited to be present.

WE are informed that Dr. J. Kingston Fowler and Dr. J. Rose Bradford have consented to stand for re-election as representatives of the Faculty of Medicine upon the Senate of the University of London.

THE Department of Public Health of Queensland, in a bulletin dated Jan. 5th, states that for the week ending on that date one case of bubonic plague occurred. The patient was a male, aged 17 years. A further bulletin, dated Jan. 12th, states that no other case had occurred. As

regards the Mauritius a telegram from the Governor received at the Colonial Office on Feb. 22nd states that for the week ending Feb. 21st there were eight cases of bubonic plague and six deaths from the disease.

THE REGISTRAR-GENERAL'S SIXTY-EIGHTH ANNUAL REPORT.

II.[1]

IN a previous notice of this report we summarised the weighty remarks of the Registrar-General on the waning fertility of English mothers. The causes of this calamity were discussed, as were also its effects in modifying the age constitution of the population and thus seriously affecting the rate of mortality.

Our readers may remember that in commenting on that portion of the report of the Duke of Devonshire's Committee on Physical Deterioration which advocates the establishment in this country of a system of disease registration, we strongly urged the desirability of the project on the ground that, valuable as the national mortality returns undoubtedly are, they can never fully supply the place of a record of that sickness which results fatally in usually a small, and always an uncertain, portion of the cases occurring. We are, therefore, the more gratified to find that the official upon whom would probably devolve the duty of administering such a system in the event of its establishment cordially supports the recommendation to which we have referred. "Ever since the establishment of the General Register Office," writes Sir William Dunbar, "the only available test by which the state of the public health could be judged has been the mortality prevailing locally from time to time. It is, however, difficult to avoid the conclusion that the data which, for more than a half century, have been relied on for this purpose—relating as they do solely to sickness of sufficient intensity to destroy life—form no reliable measure of the aggregate loss of health and of 'earning power' experienced by the community as the result of sickness. Of the 'sickness that is not unto death' the mere statement of the resulting mortality forms but a rough indication; for the fatality of most diseases varies enormously, both in different places and in different times. Not many years ago the truth of this contention was recognised by Parliament when one of the more enlightened English municipalities obtained legal powers for the notification of certain infectious diseases the prevalence of which was known to be prejudicial to health and life. Among diseases other than the common infectious ailments now recognised as communicable are tuberculosis and pneumonia, which diseases alone destroy more lives annually than do all the common infectious diseases put together. Regarding the quantitative incidence of tuberculosis or of pneumonia, not to speak of several other prevalent and fatal diseases, we are at present ignorant. A large portion of the sufferers from these diseases come under the treatment of the public hospitals, infirmaries, and dispensaries, and in view of the desirability of obtaining accurate information on this point it is, in my judgment, desirable that an attempt should be made to give effect to the recommendation of the Duke of Devonshire's Committee on Physical Deterioration by collecting periodical returns of sickness from the Poor-law medical officers in coöperation with the hospitals and other charitable institutions throughout the country." We quote Sir William Dunbar thus literally in order to show that he is in sympathy with the recommendation of the committee referred to, and also, we may add, with ourselves. The Registrar-General does not specify the department with which the decision rests, whether the Local Government Board or the General Register Office; but we gather from his remarks that in the event of a beginning being decided upon no difficulties will be raised by his department.

As in previous reports, the general subject of mortality is treated of in Dr. Tatham's letter to the Registrar-General. From this letter we learn that in the year 1905 the loss of life by disease in England and Wales was less than in any previous year on record. As compared with the average rates in the previous five years the mortality among both males and females, in town as well as in country, showed a substantial reduction, the fall in the urban group of counties being considerably greater than in the rural. In view of the steadily growing interest attaching to infantile mortality great prominence is given to the subject in the present report. In the volume for the previous year a new table had been given showing the loss of life among infants in groups of months within the first year after birth, and in each successive year of the first five. That table has been greatly extended for the present report, in fact, it has been partially reconstructed, so as still further to subdivide the first year of life, the deaths from the principal causes being shown in terms of 1000 births, in each week of the first month, and in each month of the first year. The death-rates are also shown of survivors in each subsequent year of the first quinquennium of life. This tabular extension has involved the re-abstraction of the whole of the infant deaths in 1905, but Dr. Tatham is confident that the additional labour has been justified by the results, more especially since the table now corresponds in all respects to the new tabular form No. V. issued to medical officers of health by the Local Government Board. Moreover, inasmuch as infantile mortality is shown in the present report for representative areas, urban as well as rural, medical officers of health will possess in these tables trustworthy standards by which the infantile mortality of their own districts may be judged.

In the pages of THE LANCET attention has frequently been directed to the fact that although the general mortality in this country has steadily fallen in the course of the last half century, nevertheless this benefit has by no means been shared by infants in their first year of life. Frequent and at times considerable fluctuations in the rate of death among young children are caused by atmospheric and seasonal conditions, but if an average of several years be taken it will be found that infants in their first year of life perish as rapidly now as they did half a century ago. Although this fact has been steadily kept before us in the successive reports of the Registrar-General it is only in comparatively recent times that public interest has been thoroughly aroused. Last June, however, a conference on the subject was called by Mr. John Burns, President of the Local Government Board, and the medical officer of that Board has promptly taken steps to procure periodically from every medical officer of health in England and Wales a return of mortality in the infantile community of his district.

We observe that the mortality in specified parts of the first year of life is indicated as a proportion of the total births registered within the year, although the more correct method would have been to calculate the deaths in each part of the first year on the number of survivors or on the mean population of the period. Inasmuch, however, as the births are not at present returned for intervals of time shorter than three months it is not possible to calculate precisely the number of survivors at the several weeks or months of the first year. For these periods it is explained that the published figures must be regarded as records of that portion of the total mortality under one year that occurs in the successive weeks or months of that period rather than as death-rates in the ordinary acceptation of that term.

It is shown in the tables that about one-fifth part of the total loss of life in the first year takes place within the first week after birth, whilst by the end of the first month the proportion reaches one-third, and by the end of the third month it exceeds one-half. In both sexes the first week of life is by far the most destructive to infant life. Thus we note that one out of every 35 males born, and one out of every 46 females born, perishes within a week of birth. In the first week of life the mortality of male infants is higher by nearly one-third than that of female infants. The excess in the male rate remains nearly constant for several months and then decreases irregularly until, in the fourth and fifth years of life, somewhat more female children die than male children.

The high mortality in the first few days after birth is mainly due to the decease of infants who, either from immaturity or from debility at birth, can hardly be regarded as viable. Wasting diseases, including premature birth, congenital defects, atrophy, &c., are the chief causes of deaths occurring at this early age. In the second, third, and fourth weeks of life the mortality falls to less than a quarter of that in the first week. The same diseases still account for a large share of the mortality, but from diseases other than these the mortality in successive weeks of the first month varies but slightly, being somewhat higher in the second than in the first half of that period.

[1] A previous notice of this report appeared in THE LANCET of Feb. 16th, p. 450.

The first month past, the causes just specified become rapidly less fatal, but in their stead bronchitis, pneumonia, whooping-cough, and diarrhœal disorders become conspicuous in the death roll. Bronchitis destroys the largest number of victims in the second month of life, whilst pneumonia is most destructive in the later months of the first year. Among common infectious diseases the most fatal in early infancy are whooping-cough and measles; the former disease shows almost uniformly high fatality from the second to the end of the twelfth month and then rapidly declines, whereas the latter disease attains its maximum fatality in the second year and thereafter becomes considerably less fatal.

(To be concluded.)

MEDICINE AND THE LAW.

The Action of the Police at Manchester in a Case of Attempted Suicide.

IN THE LANCET of Feb. 16th, p. 466, an account was given of the prosecution by the police at Manchester of a medical man and two others for an assault alleged to have been committed in resisting the police in the fulfilment of their duty. An elderly man had attempted to commit suicide by cutting his throat and the relatives had communicated with the police in addition to summoning medical assistance. The police were apparently under the impression that an attempt at suicide of this kind was a serious crime demanding summary arrest and the close custody and observation of the criminal, and having made up their mind that he must be removed to the Ancoats Hospital proceeded to carry out their resolution in spite of the protests of the relatives and in the teeth of a warning from Mr. S. Bagley, the medical practitioner who was already in attendance, that such a course would be attended with danger to the patient. In opposing the removal Mr. Bagley and the patient's two sons offered sufficient resistance to form the basis of a charge, and although the "assault" involved was not more than what is generally termed "technical," the police were ill-advised enough to make it the subject of legal proceedings. The charge was dismissed after an argument at least as technical as the alleged assault, on the ground that attempted suicide being a misdemeanour only the police could not arrest without a warrant unless they had witnessed the commission of the act, and that consequently to resist them did not constitute an offence. It was, however, contended on behalf of the prosecution that under a special Act passed for the benefit of Manchester in 1844 its police possess powers not enjoyed by similar officials outside the scope of that Act, and upon this question an application was made to have a case stated for the consideration of the High Court. Apart from this point, of interest chiefly to the citizens of Manchester and its police, the case appears to involve little else but the consideration of the conduct of those responsible for the arrest in question. This is a matter to which their superior officers may well give attention. To remove a wounded person, whatever his offence, when a medical man expresses the opinion that he should remain where he is, is a dangerous course to adopt. Should the death of the prisoner result from the removal the police officer responsible might find a very ugly charge framed against himself. The attempt at suicide is not now treated by the law as seriously as it was only a few years ago, when trial upon indictment necessarily followed, so that the great anxiety shown in this case to effect an immediate arrest was unusual. A point of importance to which the attention of the police should also be drawn is this: the relatives appear to have wished the old man to remain at home and to be treated there with a police officer in charge of him, and the medical man considered that this could be done. In other words, he appears to have been a patient who if he had received an injury of the same character accidentally would have been treated for it at home. Why, then, should the police take him to a hospital at all? A hospital, apart from such emergencies as street accidents, is a charitable institution for the benefit of those whose cases cannot be dealt with in their homes and who cannot afford to pay for treatment elsewhere. If the patient is a prisoner he is still received in the hospital, for it opens its doors to all without distinction of religious creed or of moral character. This, however, affords no justification for the police filling a bed in a hospital ward with a prisoner for their own convenience and without regard as to whether he is a proper object of the hospital's charity or not. It is to be hoped that this aspect of the case will be brought to the notice of the Manchester police, and that the protests of Mr. Bagley will have had the effect of causing them to act with more care and consideration in future. He doubtless regrets that owing to the case against him having been dismissed upon a point of law he was not called upon to justify his action by his evidence and to put forward his version of the incidents of which the police had given theirs.

Two American Suits: Pressure Paralysis as an Accident, and Expectancy of Life.

It is not uncommon to find that more or less prolonged pressure upon a nerve trunk will result in the temporary paralysis of the muscles and anæsthesia of the skin surfaces which are supplied by that nerve. The familiar instance is "crutch palsy" of the upper extremity. Syphilitic periostitis may lead to a gradual effect of a similar nature when, for instance, a nerve trunk passes through a foramen the walls of which are inflamed. Sometimes after a somewhat lengthy operation, where the anæsthetised patient has had to lie in a strained or unnatural posture, the paralysis which may result may puzzle one clinically inexperienced in such cases. Lately in the Indiana (U.S.A.) courts such a case led to legal proceedings. It was held that an injury to the hand superinduced by numbness resulting from using it and the forearm as a head-rest during sleep was covered by insurance against injuries through external and accidental means. The case is cited as The Aetna Life Insurance Co. *v.* Fitzgerald.—There are certain matters which, by the policy of the law, are excluded from discussion as being so problematical and so impossible of decision that it is merely to waste the court's time and to foster perjury to admit their forensic consideration. Such a matter might appear to be the probable expectancy of a person's life in the light of the knowledge of the age at death of his parents and grandparents. But it will be recalled that life insurance offices make such matters the subject of pertinent questions and the replies have been found to guide such offices in the estimation of the "life" under consideration. In the case of Haynes *v.* Waterville Railway, recently tried in the State of Maine, it was held that evidence of the age of the parents of the plaintiff was to be allowed in forming an estimate of the expectancy of his own life.

The Case of an East-End Bakery.

Two years ago, on Feb. 6th, 1905, a journeyman baker in the East-End fell down while at work and died shortly afterwards and the jury at the inquest upon his body found a verdict in accordance with medical evidence to the effect that death was due to heart failure accelerated by long hours of labour.[1] The *Daily Express* gave prominence to a somewhat sensational account of the case and published comment upon it couched in strong terms, upon which the master baker brought an action for libel. In defence the *Daily Express* pleaded that the words complained of were in their natural and ordinary meaning true in substance and in fact, and the jury took this view to the extent that although they found a verdict for the plaintiff they awarded him only one farthing as damages. Appeals by defendants against verdicts upon the grounds that the damages awarded are excessive are common, but it is unusual for appeals to come from plaintiffs who consider the damages inadequate. The baker plaintiff, however, appealed in this case successfully so far as the Court of Appeal was concerned, Lords Justices Vaughan Williams and Stirling considering him entitled to a new trial. Lord Justice Fletcher Moulton dissented and the House of Lords has now declared that he was right and the order for a new trial has been reversed. The late Lord Davey summed up the law by saying that the practice was not to disturb a verdict unless it was "perverse," and that in the case before their lordships it could not be said that the verdict was not one that might reasonably have been arrived at. The *Daily Express* is to be congratulated upon its success in a case of great importance to newspapers which, when commenting in outspoken fashion and in accordance with their duty upon matters in which the public health and public welfare are concerned, may fall into some trifling error of detail. There are people who may complain of such an error but who may not deserve

[1] THE LANCET, March 4th, 1905, p. 579.

to recover compensation on account of it, and it is satisfactory to see that juries can, and may, appreciate this. They are not, as a rule, subject to any tendency to be unduly lenient to defendants in actions for libel, as all newspaper proprietors know.

Medical and Legal Presumption of Survivorship.

The recent terrible loss of life on board the wrecked steamship *Berlin* brings into prominence a question of considerable interest from a medical as well as a legal point of view—namely, the question of survivorship. The presumption as to survivorship may become important with regard to the devolution of property; common instances affording occasions for questions of survivorship arising occur when two persons (especially when two relatives) perish in the same calamity, such as a wreck, a battle, or a conflagration. Direct proof can seldom be procured in these cases. In the Roman law and in several other codes recourse is had to artificial presumptions whenever the particular circumstances connected with the deaths are wholly unknown, such presumptions being based on the probabilities of survivorship resulting from strength, age, and sex. Thus, if a father and son perish together in the same shipwreck or battle Roman law presumed the son died first, if he was under the age of puberty; but if he was above that age that he was the survivor, the principle being that in the former case the elder is generally the more robust and in the latter the younger. The French Code has regard to the ages, and presumes that of those under 15 the eldest survived and that of those above 60 the youngest survived; that if one of the parties were under the age of 15 and the other above the age of 60 the former survived, and that if both parties were between those ages, but of different sexes, the male survived unless he were more than a year younger than the female, but that if they were of the same sex the survivorship of the younger must be presumed. The same rules were in force in the Territory of Orleans at the time of its cession to the United States and have since been incorporated into the Code of Louisiana. They have also, with some modifications, been adopted into the State of New York. But in the law of England there is no presumption of law arising from age or sex as to survivorship among persons whose death is occasioned by one and the same cause. Nor is there any presumption of law that all died at the same time. The question is one of fact, depending wholly on evidence, and if the evidence does not establish the survivorship of anyone the law will treat it as a matter incapable of being determined. The *onus probandi* is on the person asserting the affirmative. In Wing *v.* Angrave (8 H. L. C. 183) two persons, husband and wife, made their separate wills. In the husband's will the property was given to his wife, "and in case my wife shall die in my lifetime" then to W. W. in trust for the children on their coming of age, and in case all of them should die under age then to W. W. for his absolute use and benefit. In the wife's will (made under a power given by her deceased father, in default of the exercise of which the property was to go to relatives specifically named) the property was given to the husband (subject to interests in the children), "and in case my husband should die in my lifetime" then to W. W. absolutely. The husband and wife and two children perished at sea, being all swept off the deck by one wave and all disappearing together. It was held by the House of Lords that there was no presumption that the husband had survived the wife or the wife the husband. The principles thus established must be considered as the actual law governing the courts of England and their reasonableness will hardly be disputed. They discard theories which are at best founded on mere conjectures which can rarely, if ever, be verified. The principles on which the courts of England act appear to be recognised and acted on to a certain extent by Holland and the German and Scandinavian States, while in the south of Europe, Italy, France, and Spain the doctrines of the Roman law prevail.

Barberio's Reaction for Semen.

In the *Semaine Médicale*, 1906, p. 476, M. Levinsohn describes Barberio's reaction for the identification of semen and draws attention to its superiority over other methods. A concentrated aqueous solution of picric acid is added to one drop of the suspected semen or its concentrated aqueous solution. In the presence of semen rhomboidal crystals, yellow in colour, are formed. This is a delicate microscopical reaction; it is alleged to have the advantage that it is only produced with the semen of man, thus excluding the semen of various animals and the other secretions and excretions of the human body. The reaction occurs even in the absence of spermatozoa from the semen, a point of importance in cases of blennorrhagic bilateral epididymitis, when the ordinary microscopical method is useless.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Feb. 28th, 1829.

POPULAR FEELING FROM THE LATE TRIAL.

A MAN went to Bartholomew's a few days ago, complaining of hydrocele, and was placed under the care of Mr. EARLE. He was told he would soon be cured; and on Saturday last, was desired to go into the operating theatre, where it was intended to tap him. When he arrived, the theatre was crowded to excess, and the first object that attracted his attention was Mr. Earle standing by the table, with a trocar in his hand ready to operate. "Oh!" said the patient, "is this it? No, my lads; I have heard of that Barnsby Cooper's operation for the stone, in the Borough, and you don't take any stone from me, depend on't; *besides, my friends don't know where I am.*" And having thus expressed his determination, he bolted, amidst the loud laughter of the pupils. A chimney-sweeper was waiting just by, to have a cancer of the scrotum removed; but on seeing the other man make so hasty an exit, he took to his heels in the same manner, and was no more seen or heard of.

THE COMMON BUCK-BEAN, OR MARSH TREFOIL, AS A SUBSTITUTE FOR HOPS.

Mr. Yosy communicated to the Medico-Botanical Society, that the above-named plant is used in Germany as a substitute for hops, and contains the bitter principle in greater abundance than the common hop. The leaves should be gathered in the spring, and dried in the shade. It is also employed in brewing porter in Sweden, and it is said to have been introduced there by an English sailor, in 1789. For this communication, the Society presented to Mr. Yosy their silver medal.—*Transactions of the Medico-Botanical Society*, No. 1.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8250 births and 5469 deaths were registered during the week ending Feb. 23rd. The annual rate of mortality, which had been equal to 20·9 and 20·4 per 1000 in the two preceding weeks, further declined to 17·8 in the week under notice. During the first eight weeks of the current quarter the death-rate in these towns averaged 19·8 per 1000, the rate during the same period in London being 20·1. The lowest annual death-rates in the 76 towns during the week were 6·9 in King's Norton, 10·7 in Leyton, 11·6 in Derby, and 11·8 in Smethwick; the rates in the other towns ranged upwards to 24·8 in Stockport, 25·5 in Brighton, 27·7 in Middlesbrough, and 27·9 in Hanley. The 5469 deaths in the 76 towns showed a further decline of 790 from the high numbers in recent weeks, and included 390 which were referred to the principal epidemic diseases, against 466 and 412 in the two preceding weeks; of these, 136 resulted from measles, 95 from whooping-cough, 65 from diphtheria, 39 from diarrhœa, 38 from scarlet fever, 16 from "fever" (principally enteric), and one from small-pox. The deaths from these epidemic diseases were equal to an annual rate of 1·3 per 1000 in the 76 towns, the rate from the same diseases in London being only 1·2. No death from any of these epidemic diseases was registered last week in York, Sunderland, Walsall, Hanley, or in 12 other of the 76 towns; the annual death-rate therefrom, however, ranged upwards to 3·3 in Rotherham, 4·4 in Grimsby, 4·6 in Middlesbrough, and 5·6 in St. Helens. The 136 fatal cases of measles showed an increase upon recent weekly numbers; they caused an

annual death-rate of 1·6 in Smethwick, 3·7 in Grimsby, and 5·1 in St. Helens. The 95 deaths from whooping-cough showed a marked decline in the numbers in recent weeks; the highest rates therefrom were 1·2 in Rochdale, 1·7 in Rotherham, and 2·6 in Middlesbrough. The 65 deaths referred to diphtheria also showed a decline, the disease being proportionally most fatal in Derby and in Wigan. Scarlet fever caused eight deaths in London, five in Birmingham, and three each in West Ham, Sheffield, and Hull. The deaths referred to "fever" were exceptionally few. The fatal case of small-pox occurred in Bristol. No case of small-pox has been under treatment in the Metropolitan Asylums Hospitals since the end of June last. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had steadily declined in the eight preceding weeks from 3846 to 3035, further fell to 2928 in the week under notice; 322 new cases of this disease were admitted to these hospitals during the week, against 311 and 368 in the two previous weeks. The deaths in London referred to pneumonia and other diseases of the respiratory organs, which had been 526 and 527 in the two preceding weeks, declined to 379 in the week under notice, and were 59 below the corrected average in the corresponding week of the last five years. The causes of 58, or 1·1 per cent., of the deaths registered during the week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in London, Leeds, Bristol, West Ham, Salford, and in 48 other of the 76 towns; the proportion of uncertified deaths, however, again showed a marked excess in Birmingham, Liverpool, Gateshead, South Shields, and Tynemouth.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been equal to 23·0 and 22·0 per 1000 in the two preceding weeks, further declined to 18·8 in the week ending Feb. 23rd, but exceeded the mean rate in the 76 English towns by 1·0. The rates in the eight Scotch towns ranged from 14·6 and 15·9 in Aberdeen and Paisley, to 20·3 in Glasgow and 20·8 in Dundee. The 654 deaths in the eight towns showed a further decline of 110 from the numbers in the two previous weeks, and included 71 which were referred to the principal epidemic diseases, against 105 and 84 in the two preceding weeks. These 71 deaths were equal to an annual rate of 2·0 per 1000, which exceeded the rate from the same diseases in the 76 English towns by 0·7; they included 27 which were referred to whooping-cough, 25 to "fever," 10 to diarrhœa, six to diphtheria, two to measles, one to scarlet fever, and not one to small-pox. The 27 fatal cases of whooping-cough exceeded the number in the previous week by seven, and included 20 in Glasgow, three in Greenock, and two each in Edinburgh and Aberdeen. The 25 deaths referred to "fever" were fewer by 24 than the number in the previous week, including 21 in Glasgow, and two both in Edinburgh and in Paisley; 19 of the 21 in Glasgow and all the four in Edinburgh and Paisley were certified as cerebro-spinal meningitis. Of the six fatal cases of diphtheria, two occurred in Paisley. The deaths in the eight towns referred to diseases of the respiratory organs, including pneumonia, which had been 178 and 168 in the two previous weeks, further declined to 161 in the week under notice, but exceeded the number in the corresponding week of last year by 39. The causes of 23, or 3·5 per cent., of the deaths registered in the eight towns during the week were not certified or not stated; the mean proportion of uncertified deaths in the 76 English towns during the same week did not exceed 1·1 per cent.

HEALTH OF DUBLIN.

The annual death-rate in Dublin, which had been equal to 24·8, 28·6, and 31·4 per 1000 in the three preceding weeks, declined to 27·1 in the week ending Feb. 23rd. During the first eight weeks of the current quarter the death-rate in the city averaged 28·6 per 1000, the mean rate during the same period not exceeding 20·1 in London and 21·6 in Edinburgh. The 203 deaths of Dublin residents during the week under notice showed a decline of 32 from the high number in the previous week, and included nine which were referred to the principal epidemic diseases, corresponding with the number in the previous week. These nine deaths were equal to an annual rate of 1·2 per 1000, and included three from whooping-cough, three from diarrhœa, two from "fever," one from diphtheria, and not one either from small-pox, measles, or scarlet fever. The fatal cases of whooping-cough showed a further decline from recent weekly numbers. The deaths in the city included 37 of infants under one year of age and 51 of persons aged upwards of 65 years; the deaths of elderly persons were fewer than in any previous week of this year. Nine inquest cases and seven deaths from violence were registered during the week; and 71, or 35·0 per cent., of the deaths occurred in public institutions. The causes of five, or 2·5 per cent., of the deaths registered during the week were not certified; the percentage of uncertified deaths in the week under notice was 5·9 in Edinburgh, whereas every death in London was duly certified. The 146 deaths in Belfast during the week ending Feb. 23rd included 12 which were referred to cerebro-spinal fever or to cerebro-spinal meningitis.

THE SERVICES.

THE NEW SCHEME OF ARMY REORGANISATION.

Mr. Haldane on Monday last in a long and elaborate speech put the House of Commons in possession of his scheme of army reorganisation. He referred to the deficit of men in the Army Medical Department as "very serious indeed." His remarks on the subject will be found in our Parliamentary columns. With regard to the scheme generally it may probably be said to be on the whole and under existing conditions about the best which has yet been devised. But it is too comprehensive in character to be appreciated in its entirety and it is impossible to foretell how it will work out in practice. It is not easy to create an "army on the cheap," especially a good one. It remains also to be seen how far reliance can be placed on the patriotic sentiment and national sense of duty on the part of the youth and young manhood of this country to make it a success. While there is no room for doubt about Mr. Haldane's honesty of purpose and belief there will still remain much room for misgiving among all those who have not already made up their minds on the subject.

ROYAL ARMY MEDICAL CORPS.

Colonel Ernest H. Fenn, C.I.E., is placed on retired pay (dated Feb. 16th, 1907). Lieutenant Godfrey F. Rugg, from the Seconded List, to be Lieutenant (dated Feb. 10th, 1907).

Lieutenant-Colonel E. Eckersley has been appointed a recruiting medical officer in London. Captain J. C. Kennedy, from the Eastern Command, has joined the London District for duty. Captain J. M. Cuthbert has taken over temporary charge of the Glencorse Military Hospital.

ROYAL ARMY MEDICAL CORPS IN INDIA.

The following officers embarked from England on Jan. 23rd: Lieutenant-Colonel M. W. O'Keeffe, Major J. Hennessy, Captain R. Rutherford, Captain J. S. Gallie, and Lieutenant M. J. Cromie. Lieutenant-Colonel W. T. Swan has been granted extension of sick leave from Jan. 20th, 1907, to date of embarkation for India. Major Boyle has been ordered to Agra from Bareilly Brigade and Major L. Way ordered to Allahabad from Calcutta for duty. Lieutenant Keane has been ordered to Meerut for duty in the Station Hospital on completion of course of instructions in sanitation at Lucknow. Lieutenant A. A. McNeight has been transferred to Allahabad for temporary duty. Lieutenant W. C. Nimo has been transferred to Fyzabad on completion of course of instructions in sanitation at Lucknow. Lieutenant-Colonel R. E. Molesworth's passage on the *Plassy*, sailing March 6th, has been cancelled.

ARMY MEDICAL RESERVE.

The undermentioned to be Lieutenants on probation (dated Feb. 1st, 1907): Archibald Crawford Adams, Cecil Ewing, and William Mitchell Browne. Alfred Sutton Millard to be Lieutenant (dated Feb. 1st, 1907).

IMPERIAL YEOMANRY.

Duke of Lancaster's Own: Frederick James Green to be Surgeon-Lieutenant (dated Jan. 19th, 1907). Mont-

gomeryshire: Francis Ernest Marston (late Surgeon-Captain) to be Surgeon-Captain (dated Feb. 1st, 1907).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 3rd Lancashire: Surgeon-Lieutenant A. Y. Greenwood to be Surgeon-Captain (dated Jan. 26th, 1907). 4th Lancashire: Surgeon-Lieutenant-Colonel T. F. Young is granted the honorary rank of Surgeon-Colonel (dated Jan. 21st, 1907). 2nd Lanarkshire: The undermentioned Surgeon-Lieutenants to be Surgeon-Captains:—W. R. Willis (dated Feb. 1st, 1907), T. D. Laird (dated Feb. 1st, 1907), and J. Lithgow (dated Feb. 1st, 1907).

Rifle: 5th (The Hay Tor) Volunteer Battalion the Devonshire Regiment: Walter Chapman to be Surgeon-Lieutenant (dated Jan. 12th, 1907). 1st Middlesex (Victoria and St. George's) Volunteer Rifle Corps: George Chapman Steele-Perkins (formerly surgeon 1st Devonshire Royal Garrison Artillery (Volunteers)) to be Surgeon-Lieutenant (dated Jan. 17th, 1907). 4th Volunteer Battalion the Durham Light Infantry: Surgeon-Lieutenant E. G. D. Benson resigns his commission (dated Jan. 14th, 1907). 3rd Volunteer Battalion the Queen's (Royal West Surrey Regiment): Edmund Frederick Rose to be Surgeon-Lieutenant (dated Feb. 5th, 1907). 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers: Surgeon-Major D. Thomas resigns his commission (dated Jan. 8th, 1907). 3rd Volunteer Battalion the Duke of Wellington's (West Riding Regiment): Surgeon-Captain A. Waugh resigns his commission (dated Feb. 4th, 1907). 4th Volunteer Battalion the Queen's Own (Royal West Kent Regiment): Surgeon-Captain H. J. Bryan resigns his commission (dated Feb. 4th, 1907).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

1st Lothian Bearer Company: Captain A. Macdonald to be Major (dated Jan. 27th, 1907).

THE ROYAL ARMY MEDICAL CORPS WARRANT.

Our service contemporary, the *Broad Arrow*, of last week publishes a leading article on the Royal Army Medical Corps in which the recent history and future prospects of that corps are discussed in connexion with the appearance of the Royal Medical Warrant in the Army Orders for February. The article reviews the situation, and among other things analyses the probable effect which that warrant may have upon promotion in certain ranks when taken in connexion with what rumour has laid down as likely to be fixed upon as the normal establishment of such ranks.

Correspondence.

"Audi alteram partem."

THE LATE DR. SCHORSTEIN AND MEDICAL EDUCATION.

To the Editors of THE LANCET.

SIRS,—We shall be grateful if you will spare us space to advocate simultaneously the claims of medical education at the London Hospital Medical College and a memorial to one of the most prominent physicians at that college. The colleagues and friends of the late Dr. Schorstein are anxious to perpetuate his memory by the endowment of an advanced course of lectures in clinical medicine which, it has long been recognised, is one of the greatest needs of the medical school. It is not intended to create by this a course to form part of the ordinary school curriculum but rather something on the lines of the endowed lectureships at the Royal College of Physicians, such as the Goulstonian.

It is proposed that a course or courses of three or four lectures be given by a physician to be elected by the governing body of the school. The number of lectures and the remuneration will be determined by the amount of the money raised, but we wish to make clear (1) that the election to the lectureship will be regarded as a professional distinction; (2) that due notice will be given so as to afford the lecturer ample time to prepare a discourse worthy of the subject and of the man in whose memory it is given.

Subscriptions, large or small, may be sent to the honorary secretaries of the fund, Dr. Cholmeley, 11, Portland-place, W., and Dr. Cecil Wall, 6, Cavendish-place, W., or to the manager, Barclay's Bank, 27, Cavendish-square, W. They will be acknowledged on a numbered receipt form, but no list of either donors or amounts will be published, as this, it is felt, would have been in accordance with Dr. Schorstein's wish. Dr. Cecil Wall will be pleased to supply further details of the scheme on application.

We remain, Sirs, yours truly,

SAMUEL MONTAGU. STEPHEN MACKENZIE.
LEWIS MCIVER. WILLIAM OSLER.
C. H. DORKING. PERCY KIDD.

THE MEDICAL PROFESSION AND "COMPULSORY MILITARY SERVICE."

To the Editors of THE LANCET.

SIRS,—I observe with great regret that certain members of the medical profession give their support to the dangerous idea of compulsory military service for England. I beg of such gentlemen to study the subject closely before standing forward in favour of such proposals. From the selfish professional point of view alone compulsion in military service would, in my opinion, tighten the chains of "militarism" with deadly force on the medical profession. Wherever reactionary forces exist in the world the profession which more than all others clericalism and militarism desire to subordinate and to enslave is the great progressive science of medicine, that synthesis of all the modern aims, and I hope all the progressive ideas of advancing human society. How the narrow reactionary military type, some of which even still exist in England, must laugh in their sleeves to see the medical profession toying with the chains of militarism, because many medical men do not see that the one great aim of reaction is to get a fuller grip over the "doctor" so as to coerce him to serve *malgré lui* in the armed forces of the state. Many medical men are ignorant of the inner life of the army service, do not study the reasons why young men so constantly decline utterly to enter the service as private soldiers, have not looked into the many removeable causes that bar the gateway to rational soldiering, and ignorant of these facts desire to compel the masses of the people to enter by compulsion a service which does not attract for well-known and removeable causes. I venture to say that any attempt to introduce a measure of compulsory military service before manhood suffrage has been 30 years in force in these kingdoms would under existing army conditions simply lead to violent resistance and excessive emigration.

The history of the inner life in the army in bygone years has been lamentably bad. Myself a student of sociology to a certain small degree, I know no more painful story than the inner history of the army from the day when the "new model" disappeared until Sidney Herbert's sympathetic rule came to the War Office after the deplorable tragedy of the Crimean war. To-day, slowly and painfully, betterment is coming to the barracks. A juster discipline, a fuller life, growing signs of more devotion by the officers, barracks in certain garrisons better lit, better ventilated, better cooking, better teaching, a more rational and simpler dress, some betterment of the killing strain endured by 75,000 soldiers isolated in India for years to a lonely, enervating, and celibate life,—all these points are rationalising the soldier's existence and opening wider the barrack gate to the nation as a whole and not to any special classes, as has been so long the rule.

Until the other day the Guardsman with his heavy and impossible bearskin cap, which costs £6 10*s.*, had but two shirts to his name. After infinite trouble our wealthy nation gave him a first issue of a third shirt. His bed sheets were only changed once a month until a year or two ago, although last year 4000 soldiers were admitted to hospital with itch. The bathing accommodation is only one hip bath per 100 soldiers and outside folk have little idea of the discomfort of the bathing arrangements for want of good rooms and warm water. Last year 15,000 soldiers went into hospital with ague and presumably many thousands more lay on their barrack beds and did not report sick with it, but passed over the attack and returned to duty, yet I have pressed in vain to get the soldiers flannel sleeping suits for wear in the tropics as given to the soldiers in the Hong-Kong garrison. The War Office reply "they can hold out no hope to give them." Yet last year in a single county hundreds of soldiers discharged from the army went through the tramp wards of the workhouses as waifs without

work. Malarial cachexia and the enfeeblement resulting from Indian service greatly handicap these discharged men in seeking employment in the labour market against healthy men. It is true more work is done by the officer and the soldier, but the eight-hour day's work of civil life is still hardly dreamed of in the barracks, and so parents resent their boys entering a calling very poorly paid, and which weakens by its routine that development of character that a full day's work produces and on which the future of the nation depends. When people, ignoring all these drawbacks, play the card of "compulsion" I trump it with that of "betterment"—better training, better payment for officers and men, a higher ideal of service and duty to England, and on her part more sympathy with those on whom the "burden of Empire," that most exhausting and enervating strain, weighs with killing force.

In my opinion, at any rate, the army should be a high school for the young men of the land and a training institution raising each individual in it to higher ideals. Education should be fully carried out and the well-chosen officers, well paid and well treated, should live most devotedly for England and she will amply repay them if they care for her sons serving in the army. I say with much pleasure that one corps of officers have never in the past failed in this splendid betterment service. The work done in past years by the medical officers for the "betterment" of the soldier's life has been too devoted for words. Greatly handicapped and weakened by defective status in the past ages of ignorance and neglect they struggled hard and often broke down in the fight for justice for the soldier.

Had their rational, scientific, and common-sense views prevailed in the dark ages of the past army history the defective prestige of the soldier's life that now is dying out so slowly in England would never have existed, and like the police or the post office or any other public national employment a stream of the finest of our young men would with short service be pouring into the service to benefit by its teaching, as the young Dane to-day benefits by the "popular high schools" of that progressive land.

Any medical man who desires to see the soldiers at the "punishment drill" that physically weighs down the young soldier's heart and shakes his circulation has only to halt his carriage any day in front of the railings of Wellington Barracks in London and join in the crowd that day by day looks on to see the soldier at that old-world "pillory-like" punishment of "*defaultery punishment drill*," driven about the square by ignorant provost sergeants, and hustled "to make a Roman holiday" in front of a crowd of onlookers. Not all the tinsel glamour and allurements of the recruiting sergeants in Trafalgar Square can wipe out the injurious effects of this wretchedly old-world and public punishment daily going on before the public eye within a stone's throw of the Park. Yet a 6*d.* fine would quite suffice and easily wipe out the offences so punished.

All this, and much more, has to be removed and abolished within the army, and when it is done and betterment comes we shall need no "compulsion." I trust medical men in civil life will inquire into all these matters before becoming *conscriptionists*. To them I can appeal with confidence because they know the sanitary needs of the military as of the civil population and hard at work themselves can measure by their trying days of duty the easy-going life that still in certain corps, to the detriment of the nation, survives within the army. I close my letter with these watchwords, "BETTERMENT AND NO CONSCRIPTION," and appeal to all medical men to stand by this programme.

I am, Sirs, yours faithfully,

GEORGE EVATT,
Surgeon-General late A.M.S.

Junior United Service Club, London.

THE CURRANT AS A FOOD.

To the Editors of THE LANCET.

SIRS,—The "true inwardness" of the effort which has for some time been made to "boom" the currant as not only an eminently digestible but also as a highly nutritious article of diet would be both amusing and instructive if this were the proper place for exposing it. Mr. J. Cantlie has not at all exaggerated the objections to the currant from the point of view of digestibility. The currant is, of course, only a small grape, but with a proportionately tougher and less digestible skin than the ordinary grape and with relatively more of it on the well-known principle that the smaller a globular body is the larger in proportion is the ratio of its surface to its contents.

If we are to recommend any dried form of grape for dietetic use surely it would be more rational to advocate the use of sultana raisins than currants. It is rather an ambiguous recommendation of the currant to say, as Mr. Haydn Brown does, that in bread it will "cause the least harm." As to the preposterous advertisements about the highly nutritive value of currants, until those who are responsible for them can show that the juice of the currant, like that of the grape, contains anything more than a little sugar and a trace of albuminoid and saline matter, it is a mere waste of time to discuss the subject.

I am, Sirs, yours faithfully,

Gloucester, Feb. 23rd, 1907. FRANCIS T. BOND, M.D. Lond.

ON THE CONDITION OF THE BLOOD-VESSELS DURING SHOCK.

To the Editors of THE LANCET.

SIRS,—May I be permitted to make a correction in your report in THE LANCET of Feb. 23rd, p. 507, of my remarks in discussing Mr. J. D. Malcolm's paper at a meeting of the Royal Medical and Chirurgical Society on Feb. 12th. The report says that I "did not believe that the treatment of shock by the application of heat was attended by any beneficial result." To have given anyone the impression that such was my opinion I must have been more than usually halting and inconsequent. I am, in truth, quite innocent of heterodox views on the subject of shock and I accepted with all humility the statement that the application of warmth exercises a beneficial influence in the treatment of that condition. Mr. Malcolm had instanced this beneficial influence in favour of his view that the blood-vessels are contracted in shock. What I endeavoured to say in the course of my criticism of his arguments was that the beneficial influence of warmth was due in all probability partly to its agreeable effect upon the patient and largely to the fact that it tended to prevent undue loss of heat from the surface of the body; and that, further, the action of warmth upon the calibre of the blood-vessels being that of dilatation and the blood-vessels being unduly dilated in shock, such action, if it existed, which I did not believe, would be harmful and not helpful.

That the blood-vessels in shock are dilated and not contracted seemed to me to be abundantly clear from the writings of Crile, Leonard Hill, E. H. Starling, Lockhart Mummery, and others, to whose very convincing arguments Mr. Malcolm's paper had, in my judgment, opposed nothing of any real importance. There are other points on which, judging from the report, my incoherence would seem to have misrepresented me, but inasmuch as they portray me merely as an orthodox platitudinarian bore, and not as a propagandist of dangerous therapeutic heresies, I forbear to trouble you on the subject.

I am, Sirs, yours faithfully,

York-street, W., Feb. 23rd, 1907. LEONARD WILLIAMS.

BURIAL BY THE STATE.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 16th, p. 463, under the above heading, is a letter from Mr. S. P. Wills which, while expressing "wonder that the matter of burial by the State has not been made a subject of practical legislation" and indicating the details over which control is considered desirable, touches also on the collateral points of premature burial and the "earth-to-earth" and cremation systems of disposal of the dead. That these topics are highly important, intimately bearing on the individual and the community, cannot be questioned; they have already been freely handled in the press, yet no sufficient legislative action has been taken except in the case of cremation, for which necessary safeguards prior to permission to act have been promulgated. The matters touched upon range themselves under two headings: (1) action desirable on death supervention; and (2) disposal of the body subsequently; and while the efficient control of the former is beyond all doubt the duty of the State, that of the latter, more especially as bearing on one sole mode of burial and its associated details, is open to question. May I say a few words on these points?

At the present time we have a condition of affairs which,

as shown by the Parliamentary inquiry of 1893, provides "no safeguard against criminal attempts on life," forms "no trustworthy record of disease," and requires no reasonable proof of death, so furnishing an occasion for premature burial with possible accompanying horrors; yet surely it would be no difficult task to frame a few regulations which would necessitate full professional inspection by recognised and authorised officials in every case of notified death, which would require removal of the body to a public mortuary where the conditions made such action necessary on sanitary grounds, for its retention for a reasonable period pending disposal, and which would prevent burial or other disposal of the body without the certificate of the authorised official, drawn up shortly before the closure of the coffin, as to the fact of death and its causation? That the chances of concealment of foul play and of premature burial would be reduced to a minimum, that sanitary requirements would be met, and the causations of death be placed on a more reliable and scientific basis than at present pertains will not be questioned; yet we permit the present haphazard and dangerous practice to continue. Here surely the need of State intervention on death notification, for the well-being of all, is placed on an undisputable basis as a matter of duty; the facts are clear and well known to the thinking community and to the legislature; action only is wanted. And at the present time we have two methods in operation for disposal of the body—vault or earth consignment in a coffin and cremation. By the former process as usually carried out we now, just as older races did and probably now as then under the influence of religious views bearing on the resurrection of the body, oppose the natural resolution of our mortal frames through the wholesome and beneficent earth's action by inclosure in metal or strong wooden surroundings; yet we do but delay the process of disintegration thereby and give occasion to its passing through a phase of decomposition, unaccompanied by the disinfecting power of porous soil, which because it is out of sight is out of the mind of the majority of individuals though no less horrible in fact. That "earth-to-earth" burial in properly selected ground would meet the requirements of sanitation and follow closely nature's plan may be granted and there seems no reason why such a satisfactory committal to the grave cannot be effected under our existing custom with no more offence to the living than is produced by contact of the earth with the dead, some slight covering intervening. The necessary departure from our present proceedings would be some mechanical arrangement by which the top and sides of the coffin could be removed after placement in the grave and before returning the excavated soil. It may be replied that the collapsible coffin practically effects all that is needed. But is this so certain? One outcome of strict "earth-to-earth" burial would, I think, follow, and this is no small matter to those who dread the possibility of premature burial: no return to consciousness would ensue should life not be extinct. In regard to vault burial it is difficult to adduce a single point in support of it; and though in our islands committal of the body to the sea might be advocated in the future, when accumulating burials as now effected have curtailed the available desirable ground, the only other mode open to those who have a repugnance to coffin burial, for various reasons, is cremation. Mr. Wills regards it with horror; others, however, are clearly not of his way of viewing the process. Its sanitary advantages are apparent: it is rapid and effective in action; by it resolution of the body into its elements differs not from that of earth burials except in the chemical combinations effected; through preliminary necessary legal requirements the possibility of concealing malpractice is reasonably excluded and the fears of premature burial do not come into existence; it is stated not to be more costly than grave burial. Though stigmatised as "heathenish" by some, its position is essentially the same as earth burial; both systems preceded Christianity and both are now practised under it; the real principles involved in both are not those of religion but of sanitation and social jurisprudence.

Whether the time is not a ripe one for pressing home the necessity of proper regulations preceding the disposal of the dead, now that we have a political party in power whose supposed essence is social reform, is a question well worth consideration, but in respect to the permissible modes of disposal of the dead, subject to such sanitary and other safeguards as may be necessary for the well-being of the community as a whole, is not the matter rather one for the individual to decide for himself? And is it not for the individual with fears of premature burial to take such counteracting precautions as may suggest themselves pending the provision of proper legislative enactions by the State?

I am, Sirs, yours faithfully,

FRANCIS H. WELCH, F.R.C.S. Eng.

Lee, S.E., Feb. 16th, 1907.

THE CENTRAL MIDWIVES BOARD.

To the Editors of THE LANCET.

SIRS,—I notice in THE LANCET of Feb. 16th a report of the meeting of the Central Midwives Board and in the last paragraph it is stated that "the charge alleged against a midwife—A. L. Bellis—by the local supervising authority of Southampton was considered and the Board decided that she should be severely censured on her own admission of having made a false declaration of stillbirth."

I may say that the local supervising authority has not made any such charge against Nurse Bellis, nor has the local supervising authority communicated with the Central Midwives Board respecting her; furthermore, the local supervising authority has no official knowledge that she has been censured by the Central Midwives Board. I received the notice of stillbirth from her, and at the coroner's inquest she explained that it was a breech presentation, and that the child was partly born on her arrival. It would appear to me that she had a perfect right to give a certificate of stillbirth, but through a misapprehension she put "B.B.A." on the certificate. I placed so little importance on the nurse's mistake that I did not report the particulars to the local supervising authority.

Trusting you will give these remarks the same publicity as your report of the meeting of the Central Midwives Board of Jan. 31st,

I am, Sirs, yours faithfully,

R. E. LAUDER, M.D. Durh.,
Medical Officer to the Local Supervising Authority.

Southampton, Feb. 27th, 1907.

THE ADVANTAGES OF THE METRIC SYSTEM.

To the Editors of THE LANCET.

SIRS,—The Decimal Association is doing good work in helping to bring about the consummation so devoutly to be wished—namely, the adoption of a decimal system of weights and measures and coinage in the United Kingdom. Everyone, I suppose, is convinced of the absurdity of the present system, if such it can be called, for there is absolutely no uniformity in it, consisting, as it does, of a bewildering number of weights and measures of various origins. There must be real reform and there can be no adjustment or adaptation of such a clumsy system; it must go altogether in favour of metric measures applied to all the branches of standardisation, weight, capacity, length, and even coinage. The trouble is to appoint the exact moment when the old system is to be made obsolete and the new system current, but the experience of other civilised countries has proved that the difficulty of change is not as great in practice as might be thought. Further, there is no non-metric country left to worry us as we have worried others. The following is an interesting calculation, and there are scores of others in regard to the immense saving of time which would be effected if the metric system was adopted. Schoolmasters have estimated that the saving in educational time by the exclusive adoption of the metric measures would be about 200 hours per year per child. If coinage were decimalised the saving would be increased to about 350 hours—that is, about 200,000,000 hours a year for ever of school children's time can be saved by a reform which would cost adults on the average about the equivalent of a day's work. This seems alone worth while bringing about the reform in earnest apart altogether from the gain to commercial and scientific workers. We should then worry no longer about the equivalent of metres in inches (of which three barleycorns make one), of grains in grammes, of kilogrammes in tons, of pints in litres, of shillings in francs, and so on *ad nauseam*. Most of us, especially those who are compelled to make scientific calculations, hope that the Weights and Measures (Metric System) Bill ordered recently by the House of Commons to be printed will receive full, careful, and unbiased consideration. A Bill "to render compulsory the use of the system

of weights and measures commonly known as the metric system" may seem drastic, but the arguments in its support seem to me incontrovertible.

I am, Sirs, yours faithfully,

Feb. 25th, 1907. D. D. D.

ITALIAN MUNICIPAL ABATTOIRS.

A VISIT TO THE MILAN AND VERCELLI SLAUGHTER-HOUSES.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

IF the laws of Italy relating to public health questions are examined it will seem that Italy must be quite an ideal nation. The fact is that United Italy has only been in existence for a very short time and as the laws were but recently enacted they were naturally based on the best models. But between the law and its application there is a wide space. Still, it is something to know that in Italy the counsels of perfection do not conflict with the law. Thus, in an old country like England the law says that the authorities may, if they choose, build a public slaughter-house. Of course, the result is that only a very small number of local authorities have availed themselves of this permission. But the Italian *Regolamento* of August 15th, 1890, emphatically states that all communes with more than 6000 inhabitants must construct public abattoirs. Further, only a technically qualified person—that is to say, a veterinary surgeon—must be appointed as director or manager of these abattoirs. Then the law gives minute details in regard to their construction, so that they shall be thoroughly sanitary buildings. There must also be a place where animals can be kept for a period under observation and there should be a steriliser and a destructor. The last two stipulations have been carried out on a very large scale in Italy. But in other respects there is a terrible difference between the law and the reality.

M. Pion, a well-known authority on these subjects, writing in the *Semaine Vétérinaire* of 1893, says:—

> When some 30 years ago a number of slaughter-houses were built they were not supplied with sufficient water nor was enough room allowed. The means provided for suspending the carcasses were not numerous enough and they were complicated, cumbersome, and difficult to manœuvre. In most cases they are similar to the very mediocre abattoirs of the South of France, where, under so powerful a sun, there should prevail absolute cleanliness. The slaughter compartments or sheds are paved with flag-stones and there are gratings and openings where the blood flows down and mixes with excremental matter, finding its way by a sewer to a river which is generally near at hand. Sometimes the abattoir is near the seaside, as, for instance, at Bastia and Bonifacio. The fish, the seagulls, birds of prey, and dogs then play the part of scavengers. At the same time foul odours testify to the absence of sanitation. Much the same may be said in regard to most slaughter-houses on the borders of the Mediterranean, however important they may be. But there is one corrective. During the summer very few animals are slaughtered and no hogs whatsoever.

From this it will be seen that the state of affairs in Italy is not described as perfect and that the law remains to a large extent a dead letter. Nevertheless, the public abattoirs at Rome, which were completed in 1892, possess many modern improvements. There are a quarantine section, a destructor, a post-mortem chamber, and baths for the attendants; there are no private compartments for slaughtering but large halls where concealment is impossible. The principal fault is that the space, 50,858 square metres, is not sufficient for a population of about half a million. The cost was £280,000, or 14*s.* 6*d.* per inhabitant. Many other towns propose to follow the example of Rome and to build something more like modern and sanitary slaughter-houses. This is notably the case at Genoa and at Milan.

The slaughter-house of the latter town I was able to visit. In a general sense it recalls the abattoir of La Villette at Paris. There are the long rows of private compartments giving on to a roofed court, but it is not a glass roof. In Paris complaints are made of the excessive heat when the sun shines on the glass. At Milan this grievance would be more insupportable. But, on the other hand, the roof is here held up by a series of pillars rising a considerable height above the buildings on each side of the court. Thus there are a free passage of air and some light. Only a very narrow ray of sunshine reaches the floor of the court, and of course in a climate like that of Italy the object is to obtain as much air but also as much shade as possible. Apart from this the disposition is very similar to that of the Paris abattoir (see illustration in THE LANCET of Jan. 12th, p. 125). On both sides is the long succession of double doors as if it were a row of coach-houses. Each butcher hires one of these compartments, but throws these doors wide open when he is slaughtering and does some of the work outside. The bullocks and other animals are driven into these compartments where they may see at the farther end carcasses hanging from cross-beams. Much filth falls on the floor as the intestines are cleaned out on a marble slab placed in a corner of each of these compartments. The darkest corner seems to have been selected for this purpose—namely, between the door and the side wall, just where the light entering by the door cannot reach. Near the slab there is an opening to a drain in the angle of the wall. Here the small intestines are cleaned out and their contents fall on the floor. This recalled the filthy spectacle to be seen at La Villette during slaughtering time and is far from satisfactory. These small compartments only contain very rudimentary contrivances. Above there are two huge wooden rafters crossing the compartment at a height of from 12 to 14 feet. A triangular wooden apparatus, something like an artist's easel, is used to raise the carcasses. This tripod is armed with a pulley and crank. Thus the carcass of a heavy animal may be lifted and suspended to the cross-beams, but it could not be moved backwards or forwards or the halves separated. The intestines fall on the floor; the stomach is thrown into a wooden tank which is lifted by hand and emptied in the open shanty where the manure awaits removal.

The place for the slaughtering of hogs is bad but still there are plenty of light and air and a good, sound, water-tight cemented floor. The walls are not enamelled or made of washable material, so that the blood and dirt adheres to, and sinks into, them. But there are good sound troughs for washing out the intestines that can easily be kept clean. The sheep slaughter-house is much in the same condition. The surrounding walls are armed with long spikes and on these are hung the carcasses of the sheep, where they remain in the unsuitable atmosphere and dirt of the shambles. Then there is quite a large horse slaughtering department which is the worst constructed part of the abattoir. Here for air and light there are but the door and windows on one side, and only very few openings in the roof. Though a good deal of horseflesh is eaten the horse-tripe is thrown away. The place where the tripe from bullocks, &c., is washed and prepared is large, lofty, but dirty. Above there are many rafters with cobwebs hanging down in great numbers. For washing and soaking very large broad wooden tubs are used. These are fine specimens of cooperage and look picturesque, but stone or metal, not wood, is the material that should be employed.

The stables are more insanitary than the slaughtering department. Light is admitted on one side only and the structures are low and very imperfect. Instead of a well-drained water-tight floor the earth is paved with small round stones which let the liquid manure pass through and facilitate the contamination of the subsoil. Again the offices for the veterinary surgeons and staff looked shabby, dusty, and poor. The German "freibank" system of sterilising tuberculous and other slightly diseased meat, which was so well explained by Dr. Hugh A. Macewen when dealing with German methods of meat inspection in a recent number of THE LANCET,[1] is applied here. This flesh after it has been exposed to heat in a steriliser for a sufficient time is sold to the poor at the rate of 60 centimes the kilogramme, or about 3½*d.* per pound. It is the rule at Milan not to sell more than two pounds to each purchaser so that it should not be used in eating or boarding houses. Perhaps what impressed me most favourably was the carts which butchers are made to employ when they carry meat from the abattoir to their shops. These are light vehicles and in no wise ungainly. They close completely, but near the top there are on each side narrow apertures to let the air pass but not large enough to admit flies or any great quantity of dust. They are of different sizes, some small enough to be pushed or pulled along by one or two men, but so far as the meat is concerned the form of inclosure or protection is the same. The meat is also well shielded from the heat. This is a detail which needs emphasising in England and particularly in London. Here no special care is taken as to the handling and conveying of carcasses and meat; there is no such thing as a regulation butcher's cart such as may be seen any day in the streets of Milan.

As a contrast with Milan, which is one of the largest

[1] THE LANCET, Feb. 2nd, 1907, p. 318.

centres of population in Italy, I visited the slaughter-house of the small town of Vercelli. This latter institution compared very favourably with that of the capital of Lombardy. Instead of a population of 520,000, Vercelli has only 17,900 inhabitants, according to the last census. The abattoir is on the outskirts and fairly well isolated. The special building for slaughtering pigs is quite a modern structure. The floor is water-tight and convex, so that there is a drain on each side. Then there are overhead rails known as the "omnibus" system, so that the carcasses, suspended to little wheels, can be easily pushed in different directions and need not be carried. For cleaning the intestines there are good stone troughs and a large boiler provides a constant supply of hot water. The place for preparing tripe is well apart from other buildings and the floor is carefully cemented and drained. But there is not much tripe prepared here, as a large portion is sold to a dealer who takes it away to some distance from the town. In every part of the Vercelli abattoirs where there is killing the buildings are lofty and open from floor to roof; there is no upper storey. The floor, which is on a level with the earth, is rendered water-tight. Above, under the roof and on both sides of the building, there are permanent openings. These are not windows that can be closed but apertures which cause a through draught which cannot cease day or night. Altogether, considering that Vercelli is but a small town and its financial means must be limited, this slaughter-house was very creditable. At Milan it is recognised that the abattoir is unworthy of the town and I was assured by the mayor and others concerned that a new and model abattoir would be built at no very distant date. Indeed, throughout Italy the desire for really sanitary abattoirs is growing on all sides. This feeling is likely to increase as it becomes more and more evident that, with good management, these institutions can be made to pay financially.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Poor-law Medical Officers and the Chairman of the Prestwich Guardians.

AT a recent meeting of the Prestwich guardians the chairman made some general and sweeping remarks as to the inattention and neglect of duty on the part of Poor-law medical officers. This naturally excited some notice and at a meeting held on Feb. 21st a letter was read from the medical officers of the union calling attention to the strictures passed by the chairman at the last meeting on the manner in which district medical officers performed their duties and asking that the chairman should state definitely any charge that he might have against them. The result was that the reverend chairman practically withdrew his statements, which were not limited in any way, and would naturally be applied to the medical officers of the Prestwich union before going farther afield. He is reported to have said: "I have to state, in answer to the letter of the doctors, that these strictures do not apply to this union or to any of our present staff or district medical officers. When I illustrated my case for the acceptance of the resolution I proposed, I simply illustrated it by occurrences that have taken place, not necessarily in our union, and therefore I say that the honour of our medical officers has not been impugned and an unfair aspersion has not been cast upon the character of the work done." The strictures thrown broadcast were severe and calculated to injure specially the medical officers of the Prestwich union. Yet there is no word of regret. If the reverend chairman did not intend his strictures to apply to the Prestwich union he should have said so at first. The motion which he had proposed was to the effect that the guardians should be informed of all sick cases. In all probability the medical officers would be well pleased if the guardians visited their sick cases, but of course it should be done solely with the wish to coöperate in benevolent work. However, the medical officers did not lack defenders on the board, and if the disclaimer overtakes the charge no great harm will have been done.

Isolation Hospital at Hollingworth Lake.

An isolation hospital for the joint authorities of Littleborough, Milnrow, and Wardle has been built in the neighbourhood of Hollingworth Lake and was opened on Feb. 16th. It contains fever wards and an administrative block. The cost of the buildings has been £9130.

Some Hospitals and Infirmaries.

It is a pleasure to hear of a hospital free from debt, even though some philanthropists consider that the weight of a debt hanging on the neck of the committee is an incentive to their energy in the efforts that have to be made to increase old subscriptions and to get new ones. The Royal Lancaster Infirmary was stated to be in this happy state at the annual meeting on Feb. 19th. The income had increased by £104 or more in the year, and was nearly £3500. The expenditure had, as is usual, also increased but only to the amount of £71. At the end of 1905 there was an adverse balance which was wiped out by Lord Ashton, so that for the first time since the new institution had been opened there was a credit balance. There had been a considerable increase in the work of the hospital.—At the annual meeting of the Victoria Hospital, Burnley, it was shown that there was "very urgent need for a substantial extension of the hospital, and that at least £20,000 would be required." The matter is to be brought before a town's meeting, but if a few more of the wealthy residents will follow the lead of the chairman of the governors and give £2000 each, the town's meeting will no doubt approve of the scheme.—The report of the Oldham Infirmary was somewhat depressing. It was stated at the annual meeting on Feb. 18th that the year's working showed a deficit of £869, although the Hospital Saturday collections were the largest on record. The governors wished to say to the people of Oldham and district that if they wanted the infirmary kept up to its present standard they must find at least £1000 a year more than they were now doing. Taking one year with another they required £7250 to keep free from debt. Extensions and furnishing, with incidental expenses, had cost £21,156, and the amount raised was £19 590. The chairman was not dismayed and said "it only needed to be properly put before the people of Oldham, and especially the industrial people, to induce them to recognise that the infirmary had a claim upon them and ought not to be allowed to go into debt." It is to be hoped that this appeal will obtain the desired income.—The Stockport Infirmary likewise shows a deficiency on the year's working; in this case of £373. The income had been £5042 and the expenditure £5415. The accommodation was increased some time ago by 27 beds and the income has never covered the expenditure, the yearly deficit for the last seven years having been £600. To pay the way legacies have been encroached upon. It seems that a small increase of £20 has been made in the subscriptions and there was some increase in the workpeople's contributions which amounted to £1119. The work, of course, increases whatever the income may be. The mayor said that the expenditure worked out at about 1*s.* 1*d.* per head of the population and in a wealthy town like Stockport a much larger sum should be raised without difficulty. But philanthropists are prone to forget that there are many other sums of 1*s.* 1*d.* or more that must also be raised. Still, in spite of deficits, they look forward in Stockport to the extension of the out-patient department and the provision of a nurses' home.—The story told at the meeting of the Northern—formerly the Clinical—Hospital in Cheetham Hill-road was, like most of the others, a good deal chequered. Last year was the hospital's jubilee and the committee set itself the task of raising £25,000 to pay the debt to the bank, to equip the hospital fully, and to provide a sufficient endowment to put the finances on a more satisfactory basis. At the close of the year £18,092 had been raised but at the meeting the chairman was able to announce that the whole of the £25,000 had been obtained. Still, though in a much better position than it was, the deficiency of revenue, £970, added to previous deficits, amounted to £4000, which would have to be repaid to the bank out of the £25,000; and if the balance were funded, as the treasurer said, it would only bring in about £800 to meet an annual deficiency of nearly £1000. The foregoing accounts may probably be taken as representative of the state of hospital finances all over the country. All more or less in difficulties, some with their heads just above water, while others are nearly submerged. But notwithstanding the work which they are called on to do is ever increasing.

The Infirmary Site.

One of Lytton's novels bears the title "What Will He Do With It," and the people of Manchester do not as yet seem to

know what must be done with the infirmary site now that they have got it. The scheme most frequently talked of has been to build a free library and an art gallery under one roof. Another idea strongly advocated by some, and worthy of consideration, is to preserve it as an open space. The curious objection raised to this is that the space will be or look so large that the shops and warehouses in the surrounding streets will be dwarfed, a matter which would not be a grief to those rejoicing in the open space. Another project seriously put forward by one of the city council is to have not only a free library and art gallery but also colonnades and various fine things, with 250 shops. These are, I believe, more in number than those in the chief shopping streets, and if they were to succeed it would be at the expense and ruin of a good many of the shopkeepers. If they did not succeed the corporation would not get its rent, and the loss from the experiment would fall on the ratepayers. The scheme of a committee of the corporation, together with other schemes, had a long discussion given to them at the last meeting of the council. In the end the matter was referred to the committee to see if it could not devise some plan of getting revenue, in addition to providing a temple of literature and art.

Feb. 26th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Health Committee; Cerebro-spinal Meningitis; Insanitary Houses.

AT a meeting of the health committee held on Feb. 21st allusion was made to the fatal case of "spotted fever" which had occurred in the city. Dr. E. W. Hope (the medical officer of health), in reply to the chairman, said that there was absolutely no need for alarm. Cerebro-spinal meningitis was a disease which rarely appeared, and when it did appear it caused a great deal of attention out of all proportion to its gravity. Week after week and month after month there were deaths from measles and whooping-cough out-numbering this disease by 100 to 1, but the public were so familiar with those diseases that they unfortunately attracted little attention. Dr. Hope said that provision had been made in Liverpool for the isolation of any doubtful cases.—The health committee will on March 6th submit to the city council recommendations to apply the Infectious Disease (Notification) Act, 1889, to cerebro-spinal meningitis for six months as an experiment and permanently to anthrax.—A corporation scheme for the demolition of insanitary houses in the Burlington-street and Brassey-street areas at a cost of £23,250 was the subject of a Local Government Board inquiry in Liverpool last week.

University of Liverpool: Current Topics.

The University of Aberdeen is about to confer the honorary degree of LL.D. upon Professor J. Campbell-Brown, the chief of the department of chemistry at the University of Liverpool. Dr. Campbell-Brown is one of the oldest members of the University staff of professors.—Two more expeditions are to be despatched by the School of Tropical Medicine to West Africa in the course of a few months—one to further investigate the causes of sleeping sickness, and the other to investigate and to report upon blackwater fever.—In view of the Government grant of £1050 to the University, of which £350 is to be apportioned to the expenses of research work, it is interesting to note that there are at present close upon 150 post-graduate students engaged in research work in various departments of the University. The amount of research work at the University is very great and the expenses are considerable, so that this Treasury grant is particularly welcome.

The Royal Southern Hospital: The Tropical Diseases Ward.

The annual meeting of the subscribers to the Royal Southern Hospital took place on Feb. 11th at the town hall under the presidency of the Lord Mayor. An interesting feature of the report was the allusion to the value of the ward set apart for the treatment of patients suffering from tropical diseases. 120 cases were treated in the ward last year. Three cases terminated fatally—viz., one of malarial fever, one of sprue, and one of dysentery with abscess of the liver. The diseases treated were: malarial fever, beri-beri, dysentery, ankylostomiasis, leprosy, and scurvy. The nationalities included 69 English, 13 Irish, eight Scotch, four Welsh, nine Indians, four Chinese, three negroes from West Africa, two Americans, two French, two Norwegians, one German, one Greek, one Dane, and one from St. Helena. Several ladies from the Colonial Office were trained for special tropical work as nurses. A considerable number of students attended the course of instruction at the School for Tropical Medicine, a large proportion of whom obtained the diploma in tropical medicine after examination at the University of Liverpool. The ward was of the greatest possible benefit to those treated in it and deserved all the support that could be given to it by ship-owners and others interested in the port of Liverpool and especially by those engaged in foreign trade. The income of the general hospital was a little over £9000, whilst the expenditure reached £11,612. The x ray department has been enlarged and a new out-patient department is in contemplation. An appeal is also made for a "Samaritan" fund for the supply of surgical appliances to the indigent poor which is greatly needed. The total number of in-patients treated during the year was 2502. The out-patients numbered 12,075.

Vaccination Statistics for Liverpool and Toxteth Park.

During the year 1905, 5118 and 4091 births were registered in the parish of Liverpool and Toxteth Park district respectively. 4404 (Liverpool) and 3175 (Toxteth Park) children were successfully vaccinated. 10 (Liverpool) and 14 (Toxteth Park) were found insusceptible of vaccination. One conscientious objection was sustained in Liverpool and six in Toxteth Park. 560 (Liverpool) and 427 (Toxteth Park) children died before being vaccinated. None (Liverpool) and 55 (Toxteth Park) vaccinations were postponed by medical certificate. 84 (Liverpool) and six (Toxteth Park) cases were removed to districts the vaccination officers of which had been duly apprised. 59 (Liverpool) and 406 (Toxteth Park) cases were removed to places unknown and two were not accounted for in Toxteth Park. 86 per cent. of the children were vaccinated (on the births) in Liverpool; whilst if deaths before vaccination, removals, &c., are deducted, the percentage of vaccinations in Liverpool reached the extraordinary average of 97. Toxteth Park percentages are not quite so high, but are highly creditable.

Hospital Sunday Fund.

The treasurer of the Hospital Sunday Fund has reported that the amounts remitted to him to date are £6541, being £787 over and above the amount contributed last year.

A Visit to the R.M.S. "Lanfranc": A Miniature Hospital.

The new twin-screw Royal Mail steamer *Lanfranc* of the Booth Steamship Company, which has been built for service between Liverpool and Spanish, Portuguese, and South American ports, lay in mid-stream in the river Mersey on Saturday, Feb. 16th, for inspection, prior to sailing on Feb. 18th on her maiden voyage, and afforded much pleasure and wonder to her numerous visitors. Her principal dimensions are: length, 434 feet; breadth, 52 feet 3 inches; gross tonnage, 6400 tons; her engines will develop about 5000 indicated horse power, and her sea speed is designed to be about 14½ knots. She possesses a promenade deck, a shelter deck, an upper deck, and a main deck. Her sanitary arrangements are all that can be desired. At the after end of the shelter deck is a large lavatory for gentlemen. The ladies' lavatory on the same deck is situated on the port side and contains a novel feature on shipboard in the shape of a sitz bath, to which hot and cold fresh water is supplied. Another feature of interest is the large number of shower baths in both lavatories. The hospital block for first-class passengers deserves particular notice; there are three wards, with special hospital cots in each, two bath-rooms, and a dispensary, all adjoining the medical officer's comfortable apartments. This hospital contains eight cots. The first-class dining saloon is a large and handsome room, with seats for over 200 persons. There are 18 tables, each seating 12 passengers. Fresh air is brought down by two large ventilators at the forward end of the saloon and powerful electric fans insure a good circulation of air under the trying conditions which obtain in the tropics. All the berths are supplied with electric fans. The after end of the ship is fitted up for 350 steerage passengers. The large lavatories and the bulk of the sleeping accommodation are on the upper deck. An effort has been made to combine essential privacy with the free ventilation which a voyage

across the equator demands. The main deck is fitted up for men only, with open berths readily removeable as occasion requires. As regards size, comfort, and hygienic conditions the *Lanfranc* compares favourably with any passenger ship afloat.

International Congress on School Hygiene.

An influential gathering was held at the Liverpool Medical Institution on Feb. 13th, with the object of forming a local committee in connexion with the second International Congress on School Hygiene, which is to meet in London in August. The chair was occupied by Mr. Edgar A. Browne, consulting surgeon to the Eye and Ear Infirmary. The objects of the congress were explained by Dr. James Kerr, one of the secretaries, who alluded to the great progress which had been made in Germany and other parts of the continent in the matter of school hygiene. The following gentlemen were elected members of the local committee: Dr. Richard Caton (the chairman of the housing committee of the city council), chairman; Dr. E. W. Hope (the medical officer of health); Sir Edward Russell; and Vice-Chancellor A. W. W. Dale of the Liverpool University. Dr. A. G. Gullan and Dr. H. R. Jones were appointed the honorary secretaries.

Feb. 26th.

LEEDS.

(FROM OUR OWN CORRESPONDENT.)

The West Riding Rivers Board and the Disposal of Leeds and Bradford Sewage.

As is well known by all those who have the misfortune to live on the banks of the river Aire below Bradford or Leeds, the sewage of these two large cities finds its way into the river without anything like adequate purification, and for some time pressure has been brought by the rivers board on the corporations with the object of compelling them to deal satisfactorily with their effluent. Reference was made in this column last year[1] to the Temple Newsam scheme, which was adopted by the Leeds city council by an absolute majority of those present, for 36 members voted for the scheme and only 11 against it. The purchase of the 1000 acres of land at a sum of £231,000 was subject to powers being obtained in the session of Parliament of 1907 to use the ground for the purpose of sewage disposal. The opposition to the scheme is considerable and is in great part an expression of dissatisfaction at what many regard as the inordinately large price to be paid for the land. Many even of those members of the council who voted for the scheme clearly indicated that they regarded the price as excessive and that the embarrassment of Leeds was being made the opportunity of the vendors of the land. When, therefore, it was announced that clauses dealing with the matter were to be inserted in a Leeds Improvement Bill a demand was made for a poll of the ratepayers. A very full exposition of the situation was issued by Alderman J. Rawlinson Ford, the chairman of the sewage committee. In this the history of sewage disposal in Leeds was dealt with from the date of the completion of the original town's sewers in 1855 and the matter has been fully discussed in the local press. The terrors of the rivers board have been held up before the citizens, hints at a penalty of £50 per day have been made, and the expenses of arbitration and the uncertainty of Parliamentary action in the event of any attempt being made to get compulsory purchase have been advanced as reasons for accepting the scheme in spite of the large expenditure. On the other hand, the opponents have enlarged on the expense and have even said: "What is a fine of £50 per day—a paltry £18,000 a year—compared with the annual expense of the scheme?" which they say would amount to nearly £100,000 per annum. A poll of the burgesses was therefore held. The number entitled to vote was 90,000. The poll was a small one, for only 6523 exercised their privilege and the majority against the scheme was overwhelming, 4751 voting against it and only 1772 in favour of the decision of the council. There is not always safety in the multitude of counsellors, whether these counsellors are city councillors or merely men in the street, but as a result of the poll those clauses which deal with the question of sewage disposal must be left out of the Bill. The rivers board held a meeting on Feb. 15th when the result of the poll was communicated and the decision was arrived at to take legal proceedings against the Leeds city council under Section 7 of the West Riding of Yorkshire Rivers Act. This will probably mean that the corporation will be summoned before the Leeds stipendiary magistrate for an injunction to restrain it from polluting the river Aire. If the case is proved and an order is granted, it is supposed time will be given so that the defendants may carry out the necessary work to cause the pollution to cease. If at the expiration of the time the corporation has not done the work application will again be made by the board, this time for the imposition of penalties which may amount to a fine of £50 per day during the continuance of the offence. In his rejoinder to the discussion arising out of his exposition of the subject above referred to, Alderman Ford pointed out that if the Bill were dropped the council might be compelled to apply to the Local Government Board for its approval of some system of drainage, that in that case no poll of the ratepayers would be required, and that less favourable terms might be obtained than if powers were secured by Act of Parliament, for repayment would probably be spread over a smaller number of years. The action of the city council will be watched with interest. At the same meeting of the rivers board satisfaction was expressed that by the adoption on the part of Bradford of the Esholt scheme the board was relieved of the necessity of taking proceedings. This scheme, involving as it does the purchase of a large area of land at Esholt and the construction of a tunnel, is a great and expensive one. The purchase of the land was effected by compulsory arbitration; the sum awarded by the umpire was £257,099, the costs amounting to about £23,000, and it has been said that by the time the works are completed the total cost of the scheme will amount to one and a quarter millions sterling. In the net, however, it is not so great as this, for reasons that need not be entered into here.

Feb. 26th.

[1] THE LANCET, Jan. 13th, 1906, p. 123.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Court of the University of Edinburgh.

THE Court of the University of Edinburgh which met on Feb. 18th had various important matters before it. The Privy Council had transmitted an Order of His Majesty in Council approving University Court Ordinance "Edinburgh No. 6 (Regulations for the Degree of Bachelor of Science in Forestry)"; another letter intimating that the Privy Council had not approved of the Court's Ordinance No. 4 (Institution of Degrees in Veterinary Medicine and Surgery and relative Regulations). On the recommendation of the Senatus the Court approved of provision being made for the instruction of women students, with the view to graduation in law, in the law graduation subjects by admitting them to all the ordinary law classes of the University, with the exception of the class of forensic medicine, the arrangements regarding which were still under consideration. The Court appointed a committee to prepare a draft ordinance in accordance with this decision. With regard to the preceding, it may be stated that it is understood that the ordinance with regard to degrees in veterinary medicine was blocked by one of the other Scottish universities, this explaining the action of the Privy Council in withholding permission for an ordinance which had been deliberately adopted by the Court of the University of Edinburgh. This is an example of the kind of thing which has given rise to the growing demand for autonomy. The admission of women to law classes is another indication of the trend of opinion regarding the university education of women. They continue to seek admission to the medical classes also.

Cerebro-spinal Meningitis in Edinburgh.

The public health committee of Edinburgh town council has, at the instigation of the Local Government Board, recommended that an emergency order should be made for the compulsory notification of cerebro spinal meningitis to endure for a period of six months. At the same meeting at which the above decision was come to the medical officer of public health submitted a report on the disease for the month of January. During the month 25 cases appear to have occurred, of which 11 were males and 14 females, while the ages were: under one year seven cases; over one and under five, six cases; six and under ten, three cases; 10 and under 20, four cases; and above 20, five cases. Of the total 21 were fatal. Of the fatal cases subsequent investigation bacteriologically and otherwise proved eight of them to be due to other causes than

"cerebro-spinal fever"; two were cases of tuberculous meningitis, two acute meningitis, one hydrocephalus, one congenital disease, one catarrhal pneumonia, and one cardiac thrombosis. It would appear from this report that a third of the cases of meningitis which have come under the notice of the medical officer of public health are not to be attributed to the epidemic form, and this is in accordance with the experience of some of the physicians that meningitis as a whole has been unusually common this winter.

Milk- and Meat-supplies in Burghs.

The Convention of Royal Burghs has considered the questions of meat- and milk-supply and has formed strong opinions as to the necessity or desirability of greater regulation and closer inspection of both the milk- and meat-supply of the burghs. The details need not be gone into here but the recommendations are far-reaching and thorough. A deputation submitting the recommendations was received by the Local Government Board in Edinburgh on Feb. 20th. The leader of the deputation was Provost Keith, Hamilton. After hearing the deputation the Board thanked the deputation for having taken the question up and asked that any members who could give specific instances illustrating their contentions should send the facts to the Board, as such facts would greatly facilitate its consideration of the whole subject.

Medical Meeting in Edinburgh.

The annual meeting held under the auspices of the Edinburgh branch of the British Medical Association took place on Feb. 22nd. As has been customary, it was in the form of a demonstration of cases in one of the large theatres of the Royal Infirmary; while in the pathological department a very excellent exhibition of specimens was laid out. In the evening there was a dinner.

Cerebro-spinal Meningitis in Glasgow.

A comparison of the figures for last week with those of the previous week shows that cerebro-spinal meningitis appears to be on the decrease in Glasgow. During last week 42 new cases have been notified, as against 46 for the previous week, while the deaths reported last week stand at 20, as against 32 for the previous week. Only one recovery, however, has occurred in both weeks.

Glasgow Milk-supply.

In connexion with an outbreak of diphtheria which occurred in a Glasgow hospital in December of last year the veterinary surgeon discovered on a farm from which the milk was supplied two cows not in a fit condition to supply milk for human consumption, one of them having an ulcerated teat. A sample of milk was submitted to the city bacteriologist, and it was found that two guinea-pigs inoculated with the milk showed marked evidences of tuberculosis, one, indeed, dying within a few days. In reporting this incident to the town council the veterinary surgeon took the opportunity of urging that the milk-supply of the city be placed under stricter supervision. There seem to be at present three main defects in the method of supervision. In the first place it is insisted that there should be an annual registration of all persons sending milk to the city. The Glasgow milk-supply is drawn from between 800 to 1000 farms and the area tapped extends south as far as Cumberland and eastward to Selkirk and Peebles. Now, though the corporation has power to go to these sources of supply for the purpose of examining the stock, it is handicapped by the fact that it has practically no means of ascertaining who are actually consigning the milk into the town. Another weak point in the system of supervision is that the Statute relating to this does not confer power to insist that all dairymen sending milk into Glasgow should notify the city authorities of the existence of any disease in their herds. Finally, it is suggested that the local authority ought to have power to slaughter all cows suffering from any chronic wasting disease, and more especially those animals suffering from tuberculosis of the udder.

Feb. 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The University Question.

THE definite text of the Government Bill has not yet been disclosed, but the opinion of the National members and the decision of the Roman Catholic bishops are important indications. The opposition of the University of Dublin is strong, as is well shown in a letter signed by the honorary secretaries of the Dublin University Defence Committee, which has appeared in the public press. But when the Senate of the Royal University met on Feb. 20th to the surprise of many people resolutions were passed in favour of what is now considered to be the Government scheme. The Rev. Dr. Delaney, who gave adverse evidence at the Royal Commission, remains in opposition but a large majority of the professors in University College, of which he is the Principal, have affirmed their approval of what is believed to be the Government's scheme.

Cerebro-spinal Fever in Dublin.

Sir Charles A. Cameron issued the following statement from the public health office at 4 o'clock on Feb. 25th: A woman died on Friday last from cerebro-spinal fever, this being the eighth death from that disease and the tenth case. No second case has occurred in any street in which a first case has taken place and no "contact" has contracted the disease.

The Health of Belfast.

The fact that a Commission is shortly to sit in Belfast to inquire into all the circumstances of the public health of the city has drawn special attention to the questions which will be brought before it. At a meeting of the public health committee held on Feb. 19th the chairman thought that they should be represented by counsel before the Commission, but the Lord Mayor, the Earl of Shaftesbury, who was present, very wisely remarked that nothing should be put in the way of the Commission but rather that it should be welcomed by the corporation. On the same day at a meeting of the Belfast harbour commissioners Mr. Richard Patterson, J.P., a most influential member, spoke of the Public Health Commission as being excellently composed and pointed out the necessity of giving the members the fullest possible information. He said that the harbour waters had been for many years grossly polluted by sewage matter coming from the city, causing a nuisance not only in the city and within the city boundary but far beyond it on both sides of the lough. He trusted that they would make some arrangement to show the Commission and the public that the harbour board has done its utmost for many years to keep the waters of the harbour as pure as possible and that the abominable condition into which they had got (their timber ponds were now little better than cesspools) was not owing in any way to the action of the board but was almost entirely due to the health authorities of the town. Other persons spoke in the same strain.

The Belfast Water-Supply.

At a recent meeting of the public health committee it was reported by Professor W. St. C. Symmers that water taken from a house in Grosvenor-road and from another in Falls-road contained in each case "a micro-organism in every particular identical with the bacillus of typhoid fever, so far as I have been able to investigate the cultures." Further, Professor Symmers said in his letter that he considered that the water in question must be regarded with the very gravest suspicion. It was also stated that ten cases of typhoid fever had been notified in Belfast during the previous week as against six in the week before that and as compared with 24 in the corresponding week of last year. As a result, a deputation waited upon the Belfast water commissioners on the same day. The water commissioners have called in Professor P. F. Frankland, F.R.S.; Dr. A. C. Houston, bacteriologist to the Metropolitan Water Board of London; and Dr. Mervyn H. Gordon, late assistant bacteriologist, Royal Commission on Sewage Disposal, and these gentlemen have made investigations of the various catchment areas and have collected specimens for examination. The public health committee has put notices all over the city drawing attention to the matter and advising, pending further information, the boiling of all water and milk. Belfast receives its water-supply from three catchment areas—Woodburn (near Carrickfergus, on the north side of the city), Stoneyford (near Lisburn, on the west), and also from the Mourne Mountains. The first-named source serves by far the largest portion of the city, for the residents in the whole of the lower basin, or the flat area of Belfast, are supplied from the Woodburn reservoirs, the water reaching to an altitude of about 120 feet above sea-level. The districts above that line on the county Antrim side of the river, extending as far as Ardoyne, receive their supply from Stoneyford; while on the County Down side of

the river Lagan, Belmont, Knock, and those portions of the city over 100 feet above sea-level obtain their water exclusively from the Mourne source. Of course, when there is a surplus from the Silent Valley (Newcastle) it is put into consumption in the Woodburn area, the two being mixed in about equal proportions. The two houses from which were taken the samples commented on by Professor Symmers in his report are both in the area supplied from the Woodburn and the Mourne districts.

Cerebro-spinal Fever in Belfast.

There can be no question that the epidemic of cerebro-spinal fever so prevalent in Belfast presents many difficult problems for solution. 1. Is it in any ordinary sense an infectious fever? (*a*) No cases have so far been recognised in which direct infection from another person ill of the disease could be scientifically established. (*b*) The outbreaks are at different points of the city with no history of infection. (*c*) All the methods adopted—that is, isolation of patients in the fever hospital and disinfection—have failed completely in arresting the disease. (*d*) At the various hospitals where cases have been treated, no nurse, medical officer, or attendant has been attacked, a state of matters altogether different from that which would occur had cases of typhus fever or small-pox (without vaccination) or scarlet fever been introduced in the same way. (*e*) Dublin is only a three hours' journey from Belfast with a constant interchange of people: why is Dublin escaping and Belfast suffering so terribly with this strange disease? 2. The necropsies so far would support the view that the disease was swallowed, just as typhoid fever generally is, rather than that the disease germs on the German view entered the brain centres through the ethmoid from the nose. 3. May it not be that the disease germs (the meningococci) are always with us but that the peculiar atmospheric conditions have done one of two things: made patients, through catching cold, influenza, &c., more vulnerable (increased susceptibility); or has the strange, cold, variable weather made the bacilli more infective? 4. It is remarkable that all the adults attacked (and a young man of the better classes died this week at one of the Belfast suburbs called the Knock) have been almost entirely men. Why, so far, are adult women escaping? We are groping in the dark so far as to the nature of this peculiar disease, but light will come.

Feb. 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Prevention of Tuberculosis.

A MEETING of the International Society for the Prevention of Tuberculosis (*Société Internationale contre la Tuberculose*) was held on Feb. 5th when various resolutions were adopted. The first discussion arose in connexion with a communication by M. Glaisse on the subject of the sanitation of the small court-yards (*courettes*) which may be in connexion with high buildings. The atmosphere of these places was liable to become septic, fœtid, and stagnant. It might be purified by filtering the air through a spray of water and free ventilation sufficient for the prevention of bad smells could be provided if some slight modifications were made in the existing arrangements. M. Bernheim said that the best remedy for the evils complained of was to take care that these places were not too much closed in. M. Juillerat suggested that dispensary medical officers should coöperate with the compilers of the sanitary register of houses (*casier sanitaire des maisons*) by giving information as to the houses where the tuberculous dispensary patients resided. Dr. Georges Petit and Dr. Thézard communicated a paper on the use of asparagin in medicine. They had been making experiments with nutrient media for the preparation of bouillon intended for the cultivation of microbes, and in the course of this inquiry it occurred to them that asparagin associated with phosphoric acid and with various phosphates might be useful therapeutically. Clinical observations subsequently showed that asparagin promoted assimilation and might be of great service in the treatment of tuberculosis, anæmia, and various cachexias. Patients who had for a long time suffered from total loss of appetite were by this means enabled to take their food well and consequently increased in weight. Asparagin is given in doses of one or two grammes daily before the two principal meals; it is taken in alkaline or acid solutions according to the state of the patient's stomach.

Lumbar Puncture in the Complications of Suppurative Otitis.

At a meeting of the Society of Surgery held on Feb. 6th M. Legueu read an account of a case which had been under the care of M. Lapointe. The patient had suffered from suppuration in the middle ear for some years but shortly before his entry into the hospital had complained of headache, feverishness, and stiffness of the neck. M. Lapointe opened the antrum and the tympanum, enlarged an opening which he found in the upper wall of the tympanum, and evacuated a subdural abscess. The dura mater itself was intact. Nevertheless M. Lapointe, struck by the extreme polynucleosis which a lumbar puncture revealed, resolved to open the dura mater. Another abscess came into view which was drained and the patient made an uneventful recovery.

A Drug Eruption.

M. Bergé read this case before the Hospitals Medical Society at a meeting held on Feb. 22nd. The patient was suffering from acute bronchitis and after taking a medicine containing opium developed a typical scarlatiniform rash which terminated in an intense desquamation. The appearance of the eruption coincided with the disappearance of the bronchial catarrh. During the night, however, the patient was troubled again with pulmonary symptoms and took some more of the medicine as he found that it always gave him great relief. The rash appeared for the second time.

"Le Théâtre Antivénérien."

M. G. Le Vallier and M. P. Nigel have recently organised a quite novel series of evening entertainments with a view to support and to carry on the movement for the prevention of venereal diseases. The programme will include: (1) a dramatic performance in two acts—*L'Immolée*—founded on a case of sterility due to syphilis; and (2) a demonstration of the effects of syphilis exhibited by lantern pictures, according to the most recent practical observations. The entertainments in question (*soirées populaires*) commenced on Feb. 22nd at No. 133, Rue Saint Denis, and the management provide members of the medical profession with free admission and fauteuils on presentation of their cards.

Feb. 25th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Syphilis Antitoxin in the Cerebro-spinal Fluid.

Professor Wassermann and Dr. Plant, writing to the *Deutsche Medizinische Wochenschrift*, announce that they have discovered an "antistoff" of syphilis in the cerebro-spinal fluid of patients suffering from dementia paralytica. Their experiments were based on a discovery made by Professor Wassermann—namely, that the hæmolysis of red corpuscles is hindered when an "antistoff" is mixed with a fluid containing a toxin. In experiments with 41 samples of cerebro-spinal fluid the hæmolysis ceased in 32 when they were mixed with an extract of syphilitic organs. Neither the cerebro-spinal fluid alone nor the syphilitic extract alone hindered the hæmolysis, and the effect was not produced when the fluid was brought in contact with tissues obtained from a person free from syphilis. It is therefore proved that anti-syphilitic substances are formed in the cerebro-spinal fluid of the majority of cases of dementia paralytica—in other words, it is proved that these patients have formerly suffered from syphilis. Professor Wassermann and Dr. Plant, however, decline to say that the question whether this disease is really caused by syphilis is decided by these experiments.

Sick Clubs and their Medical Officers.

The medical officers of a sick club at Cologne had on the advice of the medical union resigned their appointments without giving notice of their intention, so that the members of the club were for some time left without medical attendance. The club accordingly brought an action for damages against five of the medical men and the decision of the court was to the effect that their course being illegal they were bound to indemnify the club. The club now demands not less than 100,000 marks (£5000) from the defendants but another court will have to decide whether this sum really represents the loss which the club has sustained by the sudden resignation of the medical men. This action will

certainly prevent in future medical men from entering into a strike.

Settlements for Tuberculous Patients in German South-West Africa.

A committee was formed some time ago for the purpose of settling tuberculous patients in German South-West Africa. As the rising of the natives in this colony has now ceased the committee, which includes medical men as well as other persons interested in colonial matters, has again drawn attention to the advantages of a settlement in South-West Africa. The matter was recently discussed before a meeting of the Berlin Society for Social Medicine. Professor Senator spoke in favour of the plans of the committee, saying that the sanatoriums at home received only patients in the first stage of the disease while it was still curable. A great many tuberculous patients were unable to obtain admission to the sanatoriums either from want of room or from the cases being unsuitable for sanatorium treatment. It was by this class of patients that tuberculosis was spread and benefit would accrue from their removal to a country like South-West Africa, which offered them the best possible chance of recovery. The insurance institutions under the workmen's insurance laws should therefore assist tuberculous workmen desiring to emigrate, as they were authorised by law to do. Dr. Meryet said that the climate of the colony was very good for tuberculous patients, but that cardiac diseases were frequent because of the elevation of the country, the capital, Windhoek, being situated about 1800 metres above sea level. No patients in an advanced stage should proceed to the colony, but only those who were still able to work and to earn their livelihood there.

Medical Women in Germany.

Since 1399 women have been admitted in Germany to the State examination in medicine and may therefore become duly qualified practitioners. The universities of the individual States of Germany are, however, by no means uniform in the position which they take up with respect to women medical students. The University of Jena, for instance, does not admit women at all. In all the Prussian universities and in the universities of Strasburg (Alsace-Lorraine), Rostock (Meckleburg-Schwerin), and Giessen (Hesse) women are not allowed to matriculate but are admitted only as guests (*Hospitantinnen*) and may attend a lecture or take part in a course only by the special permission of the individual professor or *privat-docent*. Some of the leading professors in the University of Berlin, such as Professor Waldeyer and Professor von Bergmann, decline altogether to admit women. The universities of Leipsic (Saxony), Tübingen (Würtemberg), Freiburg and Heidelberg (Baden), and also the three Bavarian universities in Munich, Erlangen, and Würzburg, are the most liberal, as they allow women medical students to matriculate under the same conditions as men. These concessions, however, are available only for German women, whilst for foreigners special provisions exist. As a few years ago women were excluded from nearly all the German universities, the progress made by them is considerable and it is very likely that the restrictions which are still in force at some universities will soon disappear and that women will be treated everywhere on an equal footing with the male students. Notwithstanding the facilities given to women at a good many of the German universities the number of female medical students is relatively small, their total number being, according to information collected by Dr. J. Schwalbe, the editor of the *Deutsche Medizinische Wochenschrift*, only 300, as compared with 7219 male students, equal to 4 per cent. Of these 300 ladies a good many are foreigners, so that a considerable increase of the number of medical women practising in Germany is not very likely to occur. In the beginning of the year 1906 there were only 60 duly qualified medical women registered in Germany.

Feb. 25th.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Report on Cancer.

THE cancer committee of the Royal Hungarian Medical Society has drawn up a report giving the results of last year's investigations, the chief points of it being as follows. The year's investigations show that cancer is not associated with peculiarities of diet, climate, or mode of life, thereby confirming the conclusions announced a year ago. The experiments yielded very interesting results, including a demonstration of the possibility of perpetuating malignant new growths through successive generations of mice in such a way that the cancer cells appeared to be gifted with the power of multiplication, for the malignancy of cancer and a clue to the solution of its mystery appear to lie in this abnormal proliferation and reproduction. The property of perpetual multiplication definitely separated cancer from known infective diseases. Much experimental work had been done in treating malignant growths but attempts at immunising with serums did not justify the claims sometimes made for them, although in some cases they deprived the cells of the power of growth. The action of radium and radio-active solutions had been carefully studied. It was undeniable that these sometimes influenced the growth and development of normal and tumour tissues, but there was no evidence yet obtained that radium emanations had any selective or special action on tumour tissues.

Prevalence of Influenza.

Influenza is more prevalent in Hungary this year than it has been for a long time past, and it is a striking feature that influenza bacilli are present in a great many cases of other catarrhal affections. This has been particularly the case during the present winter season. The occurrence of the disease seems to be due either to an increase of virulence or to a lowering of the resistive vitality of the patient, for the bacilli may be found even in persons not presenting primary symptoms. Occasionally, perhaps, an association of different bacilli makes inoculation more easy. It is impossible to decide, however, whether there may not be a number of other bacteria grouped as influenza bacilli because of their morphological characteristics, yet without possessing true virulence. It is not impossible that once the disease has begun and passed through several persons the bacilli gain in virulence and so become capable of affecting hitherto immune individuals.

The Pathology of Sciatica.

Dr. Verebély finds that in the literature on the subject of the pathological appearances observed in sciatica there is a general agreement as to the existence of a swelling of the nerves. Some observers, especially in England, have thought that they discovered uric acid in the neurilemma. It seems very probable, however, that these deposits were secondary. In most reported cases the nerve was found to be redder, more voluminous, and less dense than normal. In one case the sheath was found to be loosened, with some dilated veins around the nerve, but there was no sclerosis of the nervous tissue. In another case it was thought that more fat was present in the nerve than normal. Out of the 11 cases reported three were negative pathologically and the eight that were positive showed an increase in size, though without much nerve change.

The Mental Disturbances of Heart Disease.

Dr. Mahler recently read an interesting paper on this subject at a country medical meeting. The paper consisted chiefly of the clinical histories of 13 cases observed by him in which these conditions were associated. He first classified the cases under two groups—(1) mild forms, which did not produce severe mental symptoms; and (2) aggravated forms of organic disease, where the mental infirmities recorded were inferior to the physical. In the severer forms the treatment must be directed chiefly to the physical condition while in the milder forms both may be treated coincidently. Etiologically he divided the condition into four classes: (1) local conditions, such as palpitation, tachycardia, &c.; (2) pains around and within the heart, such as angina pectoris; (3) secondary lesions of the brain; and (4) disturbances of the circulation.

Feb. 23rd.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Changing the Medical Law in the Province of Quebec.

A BILL of much interest to the medical profession in the province of Quebec has just been introduced into the Quebec Legislature. It is proposed by it to extend the course of medical study from four to five years, to define better what constitutes the illegal practice of medicine, and to define better the powers of the College of Physicians and Surgeons

as to discipline, as well as to permit the College to make pecuniary grants to medical societies.

A Hygienic Institute for London, Ontario.

The Ontario Government has decided to make a grant of $50,000 to the Medical Faculty of the Western University at London, Ontario, for the purpose of a hygienic institute in that city. A sum of $5000 per annum will also be given for five years for its maintenance. As it is the policy of the present Government to encourage medical education in other sections of the province of Ontario than that immediately associated with the Provincial University at Toronto, this procedure is therefore in accordance with that policy. The city of London will give a free site for the institution and will also devote a sum equalling that of the Government to the erection of the building. The city will also erect a new contagious diseases hospital to be worked in connexion with the institute. The latter will be a great benefit to the medical men practising in Western Ontario.

Ontario Medical Council and the Canadian Press Association.

The Canadian Press Association has just finished its annual sitting in Toronto. As during the session of last year, this association has placed itself on record as being antagonistic to the Ontario Medical Council as well as to all similar bodies, which it claims are conducted by irresponsible men. The reason for the antagonism of the Press Association is not far to seek. Recently the Ontario Medical Council had before it the case of a practitioner who advertised a remedy alleged to cure *la grippe* and other bodily ills. He was found guilty of misconduct from a professional aspect and his name was ordered to be expunged from the Ontario Register. The matter was, however, taken into the courts and the name was ordered to be replaced on the Register. The disinclination of practitioners generally to advertise does not, of course, meet with the approval of the Press Association. Their action, therefore, smacks decidedly of interestedness.

New Nurses' Home Opened in Toronto.

A fine new nurses' home for the nurses of the Sick Children's Hospital, Toronto, has just been completed and opened with appropriate ceremonies. It was the gift of Mr. John Ross Robertson, the proprietor of the *Evening Telegram*, Toronto, and cost $130,000. Mr. Ross Robertson has done a great deal for this institution. He originally gave a large sum of money for the hospital and then presented to the institution the Lakeside Home for Sick Children on Toronto Island, which is said to be the largest home or hospital for summer residence in the world. The hospital has cared for 75,000 children since the day of its establishment.

Gift to the University of Toronto on the Nobel Plan.

A prospector at Sudbury, Ontario, recently died and left to the University of Toronto $10,000 of Ontario Government bonds, the interest of which is to be used in giving small prizes similar to the Nobel prizes. Two of the clauses of the will are of interest to the medical profession as well as to others in Canada. A prize is to be given for any important discovery, invention, or development by any Canadian which will lessen the dangers and loss of life in connexion with the use of electricity in supplying power and light, and another for any marked public distinction achieved by any Canadian in scientific research in any useful and practical line.

The Verdun Hospital, Quebec.

The annual meeting of the board of management of the Protestant Hospital for the Insane at Verdun, province of Quebec, was held in Montreal a few days ago, when Dr. Burgess, the medical superintendent, presented the annual report. This stated that 503 patients were in residence in the hospital on Jan. 1st, 1906. During the year 151 patients were admitted (87 men and 64 women), 110 were discharged, 34 died, and one escaped. At the close of the year there were 507 in residence. It cost $114,860 to carry on the institution during the year. The receipts were $112,182.

"Osteopaths" in Ontario.

The province of Ontario possesses a few of those citizens of the United States who now and again come into Canada for the purpose of exploiting some peculiar methods in the practice of quackery. Of these there is a body known as the "osteopaths," who now seek incorporation in the College of Physicians and Surgeons of Ontario, practically on the same basis as the homœopaths—that is to say, they desire representation on the Ontario Medical Council and licence and power to conduct their own examinations and to confer their own degrees. It is a little presumptuous but quacks are never deficient in that qualification.

Notes from Winnipeg, Manitoba.

The *Western Canada Medical Journal* has appeared at Winnipeg. Two numbers have been issued. Dr. W. Osler contributed the opening article to the first, and the opening article of the second is from the pen of a layman on "The Effect of Sunlight upon White Skin." It is a decidedly interesting and able article.—The College of Physicians and Surgeons of Manitoba is having a plebiscite taken on the subject of reciprocity with the other provinces of the Dominion.—The Manitoba Government has promised to grant $25,000 for the purposes of a consumption sanatorium when the committee in charge of the matter has raised $50,000. The sum of $15,000 has already been raised.—The Manitoba Medical College at Winnipeg has entered its new building. There are 140 students in attendance, 35 being in their first year.—The following are the officers of the Winnipeg Medical Society for the current year: President, Dr. E. W. Montgomery; Vice-President, Dr. J. R. Davidson; Second Vice-President, Dr. N. J. McLean; secretary-treasurer, Dr. C. H. Vrooman; and councillors, Dr. McKenty, Dr. H. MacKay, Dr. H. P. H. Galloway, and Dr. J. O. Todd.

Ontario Medical Council.

The following medical practitioners in the province of Ontario will constitute the Ontario Medical Council for the next four years:—Elected by acclamation: Dr. J. L. Bray, Chatham; Dr. J. McArthur, London; Dr. J. A. Robertson, Stratford; Dr. J. Henry, Orangeville; Mr. P. Stuart, Milton; Dr. S. H. Glasgow, Welland; Mr. E. E. King, Toronto; Dr. H. Bascom, Uxbridge; Dr. S. C. Hillier, Bowmanville; Dr. A. F. MacColl, Belleville; Dr. W. Spankie, Wolfe Island; Dr. J. W. Lane, Mallorytown; and Dr. M. O. Klotz, Ottawa. By election: Dr. J. H. Cormack, St. Thomas; Dr. T. W. Vardon, Galt; Dr. R. J. Gibson, Sault, Ste. Marie; and Dr. J. S. Hart, Toronto. The homœopathic representatives are Dr. G. Henderson, Strathroy; Dr. L. Luton, St. Thomas; Dr. E. T. Adams, Toronto; and Dr. C. E. Jarvis, Toronto.

Feb. 18th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Bubonic Plague.

AFTER a long interval two fresh cases of plague have occurred in Sydney. Both the patients were employed near the harbour and are mild cases. Three rats infected with plague were caught in the neighbourhood of one of the cases. A case has also occurred in Queensland.

Prevalence of Disease in Victoria.

At the last meeting of the Board of Public Health of Victoria the chairman, Dr. W. P. Norris, gave a review of some statistics as to the prevalence of certain diseases. During the fortnight ending Dec. 29th, 1906, there were 39 cases of typhoid fever, 31 cases of diphtheria, and three of scarlet fever reported. The average for the corresponding period of the years 1902 to 1905 was 89 cases of typhoid fever, 96 of diphtheria, and 50 of scarlet fever. From the year 1904 there had been a decline in the prevalence of typhoid fever; pulmonary tuberculosis had increased, the figures being 400 cases in 1904, 550 cases in 1905, and over 700 in 1906. The number of deaths, however, had been reduced. From 1901 the yearly mortality from pulmonary tuberculosis had been 701, 704, 681, 626, and 601. The population had increased and the rate per 10,000 of the population was in the same years 14·3, 14·0, 13·5, 12·2, and 11·7. The sanatorium for consumptives since its establishment 20 months ago had treated 276 patients, of whom 177 were discharged with the disease so arrested that they could return to work, 35 had been unrelieved, two had died, and 62 remained in the institution.

Amalgamation of the Medical Society of Victoria and the Victorian Branch of the British Medical Association.

As stated in a former communication, the Medical Society of Victoria has become associated with the Victorian branch of the British Medical Association, subject to the approval of the central organisation of the British Medical Association in England. The terms of the proposed combined

association and the new rules were sent to England to the council and a cable was received which was supposed to sanction the arrangement. Accordingly the annual meetings of the two societies were held conjointly on Jan. 4th and the following new office-bearers were elected under the new rules: President: Professor Harry B. Allen. Vice-Presidents: Mr. G. A. Syme and Mr. George Cuscaden. Treasurer: Dr. C. H. Mollison. Honorary secretary: Dr. L. J. Balfour. Librarians: Mr. A. W. F. Noyes and Dr. H. D. Stephens. Council: Dr. W. R. Boyd, Dr. G. T. Howard, Dr. Felix Meyer, Dr. W. Moore, Mr. F. W. W. Morton, Mr. W. Beattie Smith, Dr. J. F. Wilkinson, and Dr. A. J. Wood. All of these, except the President and Vice-Presidents, were the officers of the Medical Society of Victoria. Professor Allen has taken the leading part in the negotiations which led to the amalgamation and in drafting the scheme for union. Mr. Syme was president of the Victorian branch in 1900 and resigned with all its other members of the council and many of the branch when the branch did not ratify by a three-fourths majority the action of the council in expelling a member. Mr. Cuscaden was the retiring president of the branch and the only member of the late council of the branch re-elected.

Hospital Affairs.

The new Royal Alexandra Hospital for Children, Sydney, was officially opened by his Excellency the State Governor on Dec. 12th, 1906. It is situated at Camperdown, and will accommodate 175 children when complete. It is claimed to be one of the finest, if not the finest, children's hospital in the world. Immediately connected with the receiving and examination rooms there is a special pavilion containing four separate small wards of eight beds each, in which patients will be placed for the necessary few days following their admission, to insure their having no latent infectious disease, before their being transferred to the main pavilions, thus preventing the risk of infecting the larger wards should any such contingency arise. There are two main medical and surgical pavilions, both of which, as well as the special pavilion, are flanked by very spacious verandahs and balconies, capable of containing a row of cots and so of being utilised for sleeping out, for which further provision has been made by wide doorways from the wards to each between every pair of cots, so that they may be wheeled out.—It has been once more proposed to remove the Melbourne Hospital from its present site to one farther from the centre of the city. The proposal was first made 20 years ago but the site then suggested, the horse and pig market near the university, could not be obtained. The same site is now once more suggested. It is further proposed to remove the town hall to the present site of the hospital. The idea is that the sale of the present town hall site would furnish sufficient funds to purchase the hospital site and to rebuild there, and the purchase money of the hospital site would enable the hospital authorities to rebuild the institution in the market, and the Government is expected to grant a new site farther out still for the market. Opinions are divided as to the advisability of the proposals. The decision of the whole question will rest with the city council.—The Women's Hospital, Melbourne, has at last decided to undertake the care of women not admitted to the institution and to provide medical attendance and nursing to indigent obstetric cases in their own homes within a certain area.—Some time ago Mr. T. Scott published statements to the effect that the Warrnambool (Victoria) Hospital was imposed upon by persons who could afford to pay for private medical attendance. The committee invited Mr. Scott to prove his statements and placed the books of the hospital at his disposal. He accepted the challenge and recently wrote to the committee saying that after going through the books he found the names of 40 persons who, in his opinion, were not entitled to admission on the ground of inability to pay private fees. The committee, however, held that the cases referred to, with one exception, admitted in error, were suitable cases for admission.—At a recent inquest on a patient at the Melbourne Hospital a question was raised of some importance to medical men. The patient was admitted with septicæmia after miscarriage. The resident surgeon gave a certificate of death and the body was on the way to the cemetery when the burial was stopped by order of the coroner, who directed the making of a necropsy which showed that death was due to peritonitis and septicæmia, but there was nothing to indicate that anything of a criminal nature had occurred. The coroner, however, said that he was of opinion that abortion had been illegally procured and if the case had been differently managed by the hospital authorities the unknown author of the act might have been discovered. In every case of the kind the police should receive full information from the medical man in attendance.

Supervision of Private Hospitals.

The Select Committee of the Legislative Council of New South Wales appointed to inquire into the Private Hospital Bill has taken a good deal of evidence which points to the necessity for legislation on the subject. It was stated that 450 lying-in homes existed in the State and that many were in charge of ignorant, incapable, and often drunken women. Cases were cited where a woman had a patient waiting for confinement and the only room available for the lying-in was occupied by a patient with typhoid fever. In another instance a nurse had a case of erysipelas in the home and was at the same time attending four maternity patients in the town. 95 per cent. of the parish hospitals were lying-in homes and malpractice was rife in them.

Training of Mentally Defective Children.

At the last meeting of the Board of Public Health of Victoria the question of establishing a special training school for mentally defective children was considered. The chairman, Dr. Norris, observed that while everyone would recognise the wisdom of such a proposal he thought that it should be accompanied by some legislative enactment to prevent mentally deficient persons who received the benefit of such work, from marrying. Special treatment, while not abolishing the deficiency, might so improve the condition of the subjects that they might find it easier to marry and to transmit their hereditary deficiencies. The Board agreed with this view and the chairman was instructed to communicate it to the Chief Secretary.

A Retreat for Inebriates.

The Government of Victoria has authorised the purchase of an estate at Lava, with an area of 600 acres, for the purpose of establishing an inebriate retreat.

Deplorable Accident with a Pistol.

Dr. Andrew Davidson, medical superintendent of the Callan Park Asylum for the Insane, will receive great sympathy in peculiar circumstances. A patient had somehow procured a revolver and Dr. Davidson sent for the plumber to the institution to force the locks of the patient's boxes. He did so, and found in one of them a revolver which he handed to Dr. Davidson. Almost immediately the revolver went off and the plumber was shot fatally.

Adulteration of Milk and Butter.

Heavy fines were recently imposed in the central police court, Sydney, for adulteration of milk. There were 11 charges brought against one company trading in several suburbs. The analyses showed that the amount of added water varied from 6·75 to 21 per cent. The defendant had been convicted previously and his employers had been fined on 47 occasions.—The city analyst at Perth, Western Australia, has published a report on food-supply—chiefly milk, butter, and tinned foods. The butter he found much adulterated, oleo-margarine, fats, and oils being skilfully combined in it, and preservatives freely used. Tinned foods were invariably bad or inferior from decomposition.

Prosecution of the Vender of an Alleged Cure for Consumption.

An agent was committed for trial at the Sydney police court on Jan. 8th for obtaining money by false pretences. He sold an alleged cure for consumption called "Tuberculozque." An analysis showed that the preparation, which was sold in two bottles, No. 1 and No. 2, consisted of a dilute solution of bromide of potassium in (1) and a dilute solution of a salt of iron in (2). The agent alleged that the preparation contained copper.

Dinner to Dr. R. R. Stawell.

On Jan. 15th Dr. R. R Stawell, physician to the Children's Hospital and to out-patients at the Melbourne Hospital, was entertained at dinner by a large and representative gathering of his medical brethren prior to his departure for a visit to Europe. Sir Thomas FitzGerald presided and proposed Dr. Stawell's health, the toast being supported by Mr. M. U. O Sullivan and Mr. G. A. Syme. Dr. Stawell, in replying, after some personal reminiscences in which he acknowledged the help and loyalty of his hospital colleagues, referred to

the necessity and importance of moving the Melbourne Hospital and increasing its departments and usefulness.

Honour conferred on Dr. A. L. Kenny.

Dr. A. L. Kenny of Melbourne, who is on a visit to Europe after travelling in the East, has been appointed private chamberlain to the Pope, with the title to wear cape and sword and to rank with noblemen on duty at the Vatican. Dr. Kenny is on the staff of St. Vincent's Hospital. He acted as secretary to the Australasian Roman Catholic Congress.

Jan. 21st.

Obituary.

EBENEZER TOLLER, M.R.C.S. ENG., L.S.A.

Mr. Ebenezer Toller, who recently died at his residence, "The Zephyrs," Scarborough, after a long and painful illness, was descended from a remarkable Bedfordshire family, his grandfather and three great-uncles being each between 7 and 8 feet in height, and his four great-aunts are described on an old engraving held in the family as the four beauties of Bedfordshire. During his infancy his father died suddenly whilst speaking at a public Whig meeting at the time of the Reform Bill, his mother dying shortly afterwards. Mr. Toller studied medicine at King's College Hospital and took the diplomas of M.R.C.S. Eng. and L.S.A. in 1857 and 1858 respectively. On leaving King's College he at once became resident medical officer to the St. Andrew's Castle Private Asylum, Bury St. Edmunds, and from here he went to the Middlesex County Asylum at Colney Hatch; he was afterwards appointed medical superintendent of St. Luke's Lunatic Hospital, London, and the ability shown by him in his management there obtained for him the similar post at the Gloucester County Asylum, which he held from 1863 to 1882. This asylum had been built up gradually from a comparatively small structure to one holding rather less than 600 patients, but the demand for further accommodation made it necessary to build a branch asylum to accommodate 400 more patients on a site about a mile farther from the city. The extra work and anxiety which this expansion involved unfortunately proved so great a strain for Mr. Toller that his health completely broke down and he was compelled to retire. He was the pioneer in providing in lunatic asylums those entertainments which are now looked upon as a matter of course in every asylum. His musical ability prompted him, when a medical officer at Colney Hatch Asylum, to institute concerts for the patients. These and other forms of entertainment which he organised attracted great attention and received the recognition of the Commissioners in Lunacy so far back as March, 1862. At St. Luke's Hospital the assistance rendered by his many musical friends gave his concerts a character of more than average importance. Mr. Toller was also a strong advocate of treating the insane in surroundings as homelike as possible and deprecated strongly their being kept in large numbers in great buildings. These views he brought before the Association of Medical Officers of Asylums at the Royal College of Physicians of London in 1864, in a paper which was afterwards published with plans of cottage asylums. He was a Fellow of the Royal Meteorological Society and at Gloucester he made systematic meteorological observations which were forwarded monthly to Greenwich Observatory. He was also to be seen in the hunting field and played cricket in the asylum eleven. His second son, Dr. Seymour Graves Toller, became assistant physician to St. Thomas's Hospital, but his health failing he was appointed physician to the Government Hospital at Cairo and lecturer in medicine. Here he died suddenly and in the absence of any relatives (in consequence of their inability to arrive in time) his funeral was attended by Lord Cromer as principal mourner. A children's ward at St. Thomas's Hospital bears his name as a memorial and the "Seymour Graves Toller prize" is awarded annually to the first student in medicine. Dr. S. G. Toller was a brilliant violinist and a member of the Royal Amateur Orchestral Society. Mr. E. Toller had four other sons but only the eldest survives him. The funeral service was held at Holy Trinity Church, Scarborough, of which he was a churchwarden, and it was attended by a large number of the residents.

JOHN FALCONER, M.R.C.S. ENG.

Mr. John Falconer of Lasswade, near Edinburgh, who died on Jan. 6th at the age of 80 years, was a man whose genial personality will live in the memories and thoughts of all who knew him. The son of a well-known practitioner in Loanhead, he naturally received his education in Edinburgh and while studying medicine at the University there he became demonstrator to Professor John Goodsir. He took the diploma of M.R.C.S. Eng. in 1848 and for a time was assistant to Professor Quekett, the London histologist. He had many anecdotes of Goodsir, for whom he cherished a deep admiration, as well as of Sir Richard Owen the anatomist, and various London surgeons. During the Crimean war he did duty in the Turkish Hospital at Scutari. Soon after returning to England he went to China, where he practised at Han-kau for 17 years. At the end of this time he suffered from inflammation of the liver, from which he made a slow recovery. Being in easy circumstances he settled near Lasswade, where he could indulge his favourite pursuit of horticulture. Mr. Falconer was a man of fervid character and powerful build. He excelled in athletic exercises. A man of lively æsthetic tastes, he was warm and enduring in his friendships, keen in his resentments, easily accessible to pity, generous, and charitable. He was a zealous Freemason, being a past master of the Celtic Lodge and having held high office. About a year ago Mr. Falconer had a slight paralytic shock which recurred several times, much impairing the power of the right side and lessening the vigour of his mental faculties. His only son, John James Falconer, who had studied medicine at Edinburgh for several years and had passed all the examinations save the concluding ones, died from consumption three weeks before his father.

ROBERT A. L. GRAHAM, M.B., B.CH., B.A.O. R.U.I.

Dr. R. A. L. Graham of the Belfast District Lunatic Asylum, who died on Feb. 13th from perforation of the bowel during an attack of typhoid fever, was one of the ablest of the younger members of the Belfast School of Medicine. The son of a Presbyterian clergyman (the Rev. Dr. Graham of Comber, county Down), young Graham when a student was at Queen's College, Belfast, where, as well as in the Royal University of Ireland, he had a brilliant record. In addition to being a prizeman in many classes, he was senior scholar in biological science at Queen's College. In the Royal University he obtained the degree of B.A. in 1896, taking honours and an exhibition, and in 1898 he graduated as M.B., B.Ch., and B.A.O. At the University he was also awarded in 1899 the diploma in mental diseases, and in the following year he won the Stewart scholarship in mental diseases (£200). After graduating in medicine he studied in London, Freiburg, and at Munich. He was a skilled pathologist and was demonstrator of pathological neurology in Queen's College, Belfast. For the past nine years he had been assistant medical officer at the Belfast Asylum in Grosvenor-road. Up to the time of his falling ill—three weeks before his death—he had been collecting information for the Royal Commission on the Care and Control of the Feeble-Minded, with special reference to mentally feeble children in and around Belfast. Through his enthusiasm a small but thoroughly equipped laboratory had been fitted up at the asylum, where he did much original work, and one of his most interesting contributions to the local medical society was on a case of General Paralysis of the Insane with Syphilitic Meningomyelitis, the paper being afterwards published in the *Journal of Mental Science*. He was specially complimented by the Commissioners in Luancy for his efforts to raise the pathological side of asylum work. Dr. Graham was 31 years of age and unmarried. A modest kindly man, he had all the enthusiasm of the man of science and the thoroughness of the careful investigator and close observer.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. L. Willems, formerly President of the Belgian Academy of Medicine.—Dr. G. Daremberg of Cannes, corresponding member of the Academy of Medicine of Paris.—Dr. Karl von Lotzbeck, surgeon-general in the Bavarian army, who has been on the retired list for more than 11 years. He published various surgical papers

and a monograph on Ambroise Paré.—Dr. Jentzer, professor of gynæcology in the University of Geneva.—Dr. Eugen Pissin of Berlin, a strenuous advocate for the adoption of animal vaccine.

THE EIGHTIETH ANNIVERSARY OF LORD LISTER'S BIRTHDAY.

THE eightieth anniversary of Lord Lister's birthday occurs in April next, and it has been suggested that the event would suitably be commemorated by the republication of his scientific papers prefaced by a short biography. The biography would contain an account of the part played by the genius of Lister in the development of our knowledge of infectious processes and the history of his efforts to obviate wound infection, his work in these directions having revolutionised the whole of surgical practice and led to the saving of more lives and the prevention of more misery than it is possible to calculate. Lord Lister's original papers, which are scattered throughout the medical and scientific publications of this country, are for the most part accurate observations of his personal labours which gives them a particular value from the biographical point of view. We feel sure that a very large number of professional and scientific men, whatever their country or school, will be glad to have the collected works of Lord Lister. It may be added that already a number of Lord Lister's friends and admirers have expressed their warm approval of this means of celebrating his birthday, and it is proposed to form a committee representative of medicine and science to determine how the above object can best be attained. Dr. C. J. Martin of the Lister Institute will be glad to hear of the names of any who wish to take part in this tribute to one who for 40 years has been pre-eminent among the surgeons of the world.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The Gillson Scholarship in Pathology for 1907 has been awarded to Mr. Francis Arthur Bainbridge, M.A., M.D. Camb., D.Sc. Lond., M R C.P. Lond., of Guy's Hospital.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—M. B. S. Button (Sections I. and II.) and C. C. Morrell (Section I.), London Hospital; W. V. Pegler (Section II.), Leeds; E. W. Squire (Sections I. and II.), St. Mary's Hospital; and J. S. Ward (Sections I. and II.), Sheffield.

Medicine.—M. B. S. Button (Sections I. and II.), London Hospital; E. S. Cooke (Sections I. and II.), Royal Free Hospital; S. F. Fouracre (Sections I. and II.), Charing Cross Hospital; S. Singh (Section II.), Glasgow; and G. L. Walker (Sections I. and II.), Leeds.

Forensic Medicine.—M. B. S. Button, London Hospital; J. C. Fletcher, Royal Free Hospital; S. F. Fouracre, Charing Cross Hospital; G. Rollason, Birmingham; and R. Spears, University College Hospital.

Midwifery.—H. J. W. Barlee, Middlesex Hospital and Lyons; M. B S. Button, London Hospital; S. F Fouracre, Charing Cross Hospital; S. Singh, Glasgow; and R. P. Wylde, Manchester.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery: M. B. S. Button, W. V. Pegler, and S. Singh.

UNIVERSITY OF OXFORD.—In a congregation held on Feb. 16th the following degrees in medicine were conferred:—

Doctor of Medicine.—A. M. Gossage, Magdalen College.
Bachelor of Medicine and Surgery.—L. T. Burra, University College.

On Feb. 19th a statute was passed in convocation empowering the Board of the Faculty of Medicine to send two representatives as members of the Board of Studies for Responsions.

UNIVERSITY OF CAMBRIDGE.—Dr. Laurence Humphry has been appointed a member of the degree committee of the special board for medicine.—Dr. Rouse, Mr. O. Browning, Mr. J. Wallis, Mr. E. A. Parkyn, and Mr. D. H. S. Cranage have been appointed delegates to the International Congress on School Hygiene, to be held in London next May.—Mr. F. Darwin, M.A., M.B., has been appointed to represent the University at the 200th anniversary of the birth of Linnæus, to be held at Upsala in May next.—The following have been appointed electors to professorships in the University:—Anatomy: Professor Howard Marsh and Professor A. Thomson. Downing of Medicine: Sir Thomas Barlow and Sir E. C. Perry. Botany: Professor Langley. Zoology: Dr. W. H. Gaskell and Professor Graham Kerr. Physiology: Professor Sherrington and Dr. H. K. Anderson. Surgery: Dr. L. Humphry. Pathology: Professor G. H. F. Nuttall.—At a Congregation on Feb. 14th the following degrees were conferred:—

M.C.—H. M. Davies, Trinity.
M.B.—C. M. Stevenson, St. John's; and B. E. Atkin, Gonville and Caius.

The collections in the Museum of Zoology have been enriched by gifts of a cast of the skeleton of the gigantic marsupial *Diprotodon australis* by Dr. E. C. Stirling, F.R.S., of Adelaide, and of skeletons, skulls, and skins of antelopes from Florida and tropical Africa by Mr. C. B. C. Storey.—Mr. J. J. Lister, St. John's, has been appointed a manager of the Balfour Fund for Animal Morphology in the place of the late Sir Michael Foster, K.C.B.—Mr. F. A. Potts, Trinity Hall, is to occupy the University table in the Marine Biological Association's Laboratory at Plymouth.

UNIVERSITY OF LONDON.—At examinations held recently the following satisfied the examiners:—

B.SC. DEGREE BY RESEARCH (FOR EXTERNAL STUDENTS).

Chemistry.—Thomas Stewart Patterson, University of Leeds; and Kenworthy James Thompson, University College, Aberystwyth.
Geology.—Lewis Leigh Fermor, Laboratory of the Geological Survey of India, Calcutta.

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATION.—The following candidates, having passed the necessary examination, have been admitted Fellows of the College:—

John Armstrong, B.Ch., &c., Royal University, Ireland; Samuel Creighton Clarke, L R.C.S.I., &c.; Raghunath Vithal Khedkar, L.R.C.S., &c., Edin.; George Whitfield Little, L.R.C.S.I., &c.; Augustus Anson Warren Merrick, L.R.C.S.I., &c.; and Francis James Palmer, L.R.C.S.I., &c., Captain, R.A.M.C.

The following candidates have passed the primary part of the Fellowship examination:—

Burjorji Pirozsha Ranaji, L.M. and S., Bombay University; Patrick Edward Hayden, L R.C.S.I., &c.; Henry Stokes, B Ch., &c., University, Dublin; Robert Adams, Miss Ina Marion Clarke, Ernest Cotton Deane, Frank Newenham Harvey, Noel Morley Herbert, John Joseph M'Grath, John Menton, Miss Amy Florence Nash, George Cuming Sneyd, Miss Cecilia Forence Williamson, and Owen Waller James Wynne.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bonn:* Dr. Hermann Kuhnt of Königsberg has been appointed Professor of Ophthalmology in succession to Professor Theodor Saemisch who has retired; Dr. H. Stursberg has been recognised as *privat-docent* of Internal Medicine.—*Brussels:* A School of Tropical Medicine will be opened next autumn and will pay special attention to sleeping sickness; Dr. van Kampenhout has been appointed Director.—*Giessen:* Dr. Voit of Basle has declined the chair of Medicine.—*Heidelberg:* Dr. Otto Benda has been recognised as *privat-docent* of Anatomy.—*Jena:* Dr. Giese, *privat docent* of Forensic Medicine, and Dr. Lommel, *privat-docent* of Medicine, have been appointed Extraordinary Professors.—*Kiel:* The chair of Ophthalmology which Professor Völcker is resigning has been offered to Professor Otto Schirmer of Greifswald.—*Königsberg:* Dr. Otto Voss, *privat-docent* of Otology, has been granted the title of Professor.—*Munich:* Dr. Ernst Moro of Gratz has been recognised as *privat-docent* of Children's Diseases and Dr. M. Geiger as *privat-docent* of Psychology.—*Prague (German University):* A chair of Experimental Morphology and one of Laryngology are about to be established.—*Tomsk:* Dr. Wedenski has been appointed Professor of Surgery.—*Turin:* Dr. Teobaldo Soli has been recognised as *privat docent* of Midwifery and Gynæcology.—*Würzburg:* Dr. Enderlen of Basle has been appointed Professor of Surgery in succession to the late Professor Schönborn.

DONATIONS AND BEQUESTS.—The honorary secretaries of King Edward's Hospital Fund for London have received the sum of £10,000 from the executors of the late Mr. John Nicholas.—The late Mr. James Borwick Davison has bequeathed, subject to his wife's life interest, £1000 to King Edward's Hospital Fund and £500 to the Surbiton Cottage Hospital.—By the will of Mrs. Harriet Venables the Infant Orphan Asylum at Slough will receive £500. The

will also bequeaths £400 each to the National Hospital for Paralysed and Epileptic, the Hospital for Incurables, Putney, Windsor Infirmary, Maidenhead Cottage Hospital, Earlswood Asylum for Idiots, and the Infant Orphan Asylum at Wanstead.

THE Leicester town council at its meeting on Tuesday last increased the salary of Dr. C. K. Millard, the medical officer of health of the borough, from £600 to £700 per annum.

SHANGHAI GERMAN MEDICAL SCHOOL.—Dr. Claude du Bois Reymond, a son of the eminent physiologist, who is now *privat-docent* of ophthalmology in Berlin, has been offered a post as teacher of ophthalmic surgery in the Shanghai German Medical School. The appointment is for six years.

WEST LONDON POST-GRADUATE COLLEGE.—The Post-Graduate College attached to the West London Hospital has now been recognised by the University of London as an institution where candidates for the M.D. degree can spend the necessary year of hospital study after passing the degree of M.B.

SCARCITY OF CERTIFIED MIDWIVES.—At a meeting of the Loughborough (Leicestershire) rural district council on Tuesday, Feb. 19th, the medical officer of health of the county wrote drawing attention to the scarcity of certified midwives in the district. He asked the council to inform him if it knew of any suitable women who would be likely to take up the work.

PRIZE FOR INDUSTRIAL HYGIENE.—The council of the Society of Arts is prepared to award, under the terms of the Benjamin Shaw Trust, a gold medal, or a prize of £20, "for any discovery, invention, or newly-devised method for obviating or materially diminishing any risk to life, limb, or health incidental to any industrial occupation, and not previously capable of being so obviated or diminished by any known and practically available means." Descriptions of inventions must be sent in not later than Dec. 31st, 1907, to the secretary of the Society of Arts, Adelphi, London, W.C., either under the inventor's name or under a motto, accompanied by a sealed envelope inclosing the name. The judges will be appointed by the council. The council reserves the right of withholding the prize or of awarding a smaller prize or smaller prizes.

BRITISH MEDICAL BENEVOLENT FUND.—The annual general meeting of the supporters of this fund was held at 15, Wimpole-street, W., on Feb. 19th. Sir William H. Broadbent, the President, was unable to be present, and Sir William S. Church being prevented by a meeting of the amalgamated societies from presiding as announced, the chair was taken by Mr. E. Parker Young, chairman of the committee. The report of the committee for the preceding year was read and adopted, and was ordered to be printed for circulation. In the annuity department the income was £2465 2*s*. The following legacies were received and duly invested: Dr. Grieve, £259 10*s*. 6*d*.; Dr. W. Burns, £90; Dr. Parsons, £100; Dr. Cameron, £100; and Dr. Trollope, £500; total, £1049 10*s*. 6*d*. In the grant department the amount distributed was £1619 5*s*., as against £1562 in the preceding year. The total amount of money received, however, appeared to be less by £150. In 1905 a special appeal was made which brought in donations to the amount of £641. During the year without any special appeal the donations reached the satisfactory sum of £226, while the annual subscriptions showed the remarkable increase of £251. This increase, though the result in part of personal effort, was largely due to the generous assistance rendered by the editors of THE LANCET and of the *British Medical Journal* in permitting the publication in their columns each month of the proceedings of the committee with an abstract of the cases relieved. This simple record of facts told in an eloquent and touching way the work and wants of the fund. A special donation of £20 was again received from Miss Flower to enable some of the most deserving cases to get a summer holiday. Other special donations to provide special Christmas gifts were received from Miss Flower of £20, from Dr. Satchell of £10 10*s*., and other sums from Mr. Patmore Sheehy and Miss Breeze. The accounts were audited as usual by Messrs. Deloitte, Plender, Griffiths, and Co., chartered accountants. The committee, while glad that the favourable anticipations made in the report of last year had been realised, felt only too well how much still remained to be done before the fund was recognised as widely and supported as liberally as it deserved and ought to be, and called upon all interested in its work to continue, and, if possible, to increase, their efforts on its behalf.

THE MIDDLESEX HOSPITAL.—A meeting of the court of governors was held on Feb. 28th, when Mr. Henry Morris occupied the chair. After the transaction of the usual business an address was presented to Nurse Sarah Cross in recognition of her heroic services during the recent earthquake in Jamaica.

GUY'S HOSPITAL.—The treasurer of Guy's Hospital has received a bequest of £1000 under the will of the late Mr. Charles James Oldham, F.R.C.S. Eng., of Brighton for the purpose of endowing an annual prize in ophthalmology at the Medical School. A further anonymous donation of £200 has also been received for the Fund for the Endowment of Medical Education and Research.

ROYAL PORTSMOUTH HOSPITAL—Two important meetings in connexion with the Royal Portsmouth Hospital were held last week. On Feb. 22nd the mayor presided over a meeting at the town hall, which was held to inaugurate a fund for the erection of new children's wards in place of the present inadequate, ill-adapted, and insanitary ones. A generous contribution of £500 was made by Mr. J. J. Young, J.P. (chairman of the committee of management), and a sum of £2525 was obtained before the meeting closed. On the following day the annual meeting of the subscribers was held, Mr. T. A. Bramsdon, M.P., presiding. The report, which was a satisfactory one, stated that there was only a small deficit of £89 on the year's working, there was an increase of 1280 cases in the number of patients treated, and the average cost per bed occupied on total ordinary expenditure was £58 11*s*. Only two hospitals in the kingdom were conducted on more economical lines. The Hospital Saturday Fund contributed £973, and £804 11*s*. were received from the Hospital Sunday Fund.

MRS. CRAIGIE MEMORIAL FUND.—A committee, which has been formed by some of the friends of the late Mrs. Craigie (John Oliver Hobbes) to raise subscriptions for a memorial to her, appeals to the medical profession on the ground that the deceased novelist was formerly a student at University College. It is proposed that, in the event of sufficient funds being collected the memorial should include the following: (1) a portrait plaque, in marble or bronze, to be placed in University College, London; (2) a replica of the plaque to be placed in a suitable position in the United States; (3) a scholarship for the study of modern English literature to be given annually in England; and (4) a similar scholarship to be given annually in the United States. Subscriptions may be sent to one of the honorary treasurers—viz., the Hon. Mrs. Rochfort Maguire, 3, Cleveland-square, St. James's, S.W.; Mrs. George Cornwallis West, Salisbury Hall, St. Albans; Miss Blanche Eliot, 8, Onslow-gardens, South Kensington, S.W.; or to Messrs. Barclay and Co., Limited, 1, Pall Mall East, London, S.W.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Public Health Bill.

THE text of the Public Health (Regulations as to Food) Bill which was brought in by Mr. JOHN BURNS on the second day of the parliamentary session has been published. It provides that the power of making regulations under the various Public Health Acts shall include "the power of making regulations authorising measures to be taken for the prevention of danger arising to public health from the importation, preparation, storage, and distribution of articles of food or drink (other than drugs or water) intended for human consumption." The Bill further sets forth that without prejudice to the generality of the powers so conferred, those regulations may (*a*) provide for the examination and taking of samples of any such articles; (*b*) apply, as respects any matters to be dealt with by the regulations, to any provision in any Act of Parliament dealing with the like matters, with the necessary modifications and adaptations; and (*c*) provide for the recovery of any charges to be made by the regulations. Both Mr.

ASHLEY and Mr. COURTHOPE have given notice that they will move the rejection of this measure.

Butter and Margarine Bill.

The Bill which Sir EDWARD STRACHEY has introduced into the House of Commons to make further provision with respect to the manufacture, importation, and sale of butter, margarine, and similar substances has been printed. It contains clauses for the registration and inspection of butter factories and for the prohibition of adulterants on these premises. The inspection of these factories is placed in the hands of officers of the Board of Agriculture and of officers of local authorities who are authorised to procure samples under the Sale of Food and Drugs Act. Clause 4 of the Bill imposes a limit of moisture. No butter in any butter factory must contain more than 16 per cent. of water and a like standard is set up for margarine. If that limit is exceeded the occupier of the factory or the consignor of the butter or the margarine shall (whether the excess of moisture is due to adulteration or not) be guilty of an offence under the Act unless he proves to the satisfaction of the court that the butter or margarine was not made, blended, reworked, or treated in the factory. Any person who manufactures, sells, or exposes for sale, or has in his possession for the purpose of sale, any butter substitute which contains more than 24 per cent. of water will also be guilty of an offence under the Act. These limits of moisture are applied in another clause to imported butter, margarine, and butter substitutes.

Medical Inspection and Treatment of School Children.

The Education Acts (Amendment) Bill introduced by Mr. WALTER REA contains a provision for the medical inspection of school children. Under this Bill a local education authority would be empowered "to provide for the medical inspection of children before or at the time of their admission to a public elementary school and on such other occasions as the Board of Education direct." It would also have the power to make such arrangements as might be sanctioned by the Board for attending to the health and physical condition of the children educated in public elementary schools.

Coroners' Inquests.

Mr. LUKE WHITE has presented a Bill in the House of Commons which is designed to dispense with the compulsory viewing of bodies on the holding of coroners' inquests.

The Sale of Whisky Bill.

The Bill, which has been presented in the House of Commons by Mr. WILLIAMSON, for the purpose of amending the law relating to the Sale of Whisky and to provide for the marking of casks and other vessels containing whisky, has been printed. It is backed by Mr. MURRAY, Mr. CATHCART WASON, Sir ANDREW TORRANCE, and Mr. BILLSON. The provisions of the Bill are summarised in a memorandum, the most important being as follows: To secure to purchasers of whisky a clear statement whether it is a whisky made in a pot still from pure malt, or of malt and corn, or is in part a spirit made in a patent still from unmalted grain. To carry out this object the Bill proposes to enact that all whisky shall, from the time of leaving the distillery till sold to the consumer, be described by a mark or label on the cask or bottle as "whisky" or "blend of whisky and patent still spirit," as the case may be. Provision is made for similar information being given to persons purchasing whisky on draught. Power to prosecute for offences against the Bill is given to officers of Inland Revenue, but persons authorised by local authorities having the execution of the laws relating to food and drugs are also to have power to prosecute and are to be supplied by the Inland Revenue with the information necessary for that purpose.

Infant Life Protection Bill.

Mr. STAVELEY HILL'S Bill to amend the Infant Life Protection Act, 1897, is supported by Sir JOHN KENNAWAY, Mr. ARTHUR LEE, Mr. HAY, Mr. WALROND, Mr. RAMSAY MACDONALD, Mr. HILLS, and Mr. NICHOLLS.[1]

The Government's Pharmacy Bill.

On Friday Mr. HERBERT SAMUEL presented to the House of Commons a Bill promoted by the Home Office to regulate the sale of certain poisonous substances and to amend the Pharmacy Acts. A Bill introduced by Mr. WINFREY to amend the Pharmacy Acts has also been printed. It provides, *inter alia*, that every shop for the sale of poisons "shall be under the *bond fide* personal conduct and supervision of a duly qualified person," and for the "maintenance of a register of shops where poisons may be sold, and also a register of the duly qualified chemists conducting each such shop," and requires that "companies keeping open shops for the sale of poisons shall have that portion of their business managed by a duly qualified chemist as director."

The Army Medical Services.

The Secretary of State for War in his memorandum relating to the Army Estimates for 1907-08 makes a brief reference to medical matters in the army. He states that the principles of sanitation are being steadily inculcated in the army by means of a school of army sanitation at Aldershot for combatant officers and men, and for non-commissioned officers and men of the Royal Army Medical Corps by the compulsory examination of all officers in hygiene, the distribution of literature, and by the delivery of lectures by officers of the Royal Army Medical Corps. By these means, and by the institution of sections of specially trained men to look to the sanitary affairs of units in the field, it is confidently hoped to reduce the proportion of sick in future campaigns.

Public Health Legislation.

The Earl of ONSLOW has intimated that he intends to initiate a discussion in the House of Lords on various Public Health Acts. He intends to ask the Government whether, in its opinion, the time has arrived for the extension of these Acts. No date has yet been named for the discussion.

The Registration of Nurses.

Mr. CLAUDE HAY has given notice that he intends to introduce a Bill to provide for the better training and registration of nurses and for the voluntary registration of private nursing homes.

The Public Health Acts.

Mr. J. W. WILSON on Tuesday introduced a Bill to amend the Public Health Acts.

HOUSE OF COMMONS.

WEDNESDAY, FEB. 20TH.

Cerebro-spinal Meningitis.

Mr. LUPTON asked the President of the Local Government Board, with reference to the recent outbreaks of spotted fever in the United Kingdom, whether there was any practical method of ascertaining that a tube of vaccine virus was at the time of use free from the contagion of cerebro-spinal meningitis; and, if the answer be in the negative, whether he would discontinue the manufacture of calf lymph until it could be guaranteed free from all extraneous disease germs.

Mr. JOHN BURNS replied: I am advised that there is a practical method of ascertaining the presence of the organism of cerebro-spinal meningitis in vaccine lymph, and that in the periodic bacteriological examination which is made of each batch of calf lymph this organism if present and alive would be detected. I am further advised that the processes adopted in the elimination of extraneous micro-organisms from the lymph would undoubtedly destroy the organism in question.

Mr. J. W. WILSON: What steps are being taken to secure protection from the disease?

Mr. BURNS: I am issuing a circular to the sanitary authorities relative to this disease and I am forwarding a memorandum to them on the subject that has been prepared by the medical officer to the Local Government Board. The report has been made by Dr. M. H. Gordon to me on the micrococcus of epidemic cerebro-spinal meningitis, with special reference to identification in the upper respiratory passages. That report is in the press and will be published in the course of a few days. If further medical investigation is found necessary on this matter I shall not hesitate to take prompt steps.

Mr. WILSON: Does the right honourable gentleman expect any immediate danger?

Mr. BURNS: I do not think there is any immediate cause for panic or alarm. The whole of the medical authorities are apprised of the position and are doing the best they can in the matter.

Mr. JOHN DILLON: Has the right honourable gentleman power to take or has he taken any means to control the trade in old clothes in the city of Glasgow? The disease seems to have spread in that centre and I should say that trade would be exceedingly dangerous.

Mr. BURNS: The Local Government Board is taking every step to ascertain what are the causes likely to spread this disease and will specially inquire into the question raised by the honourable Member.

Vaccination Fees.

Mr. RAPHAEL asked the President of the Local Government Board for what reason the Board had insisted that the Poor-law guardians of the borough of Derby should pay the medical officer of the union workhouse a fee of 2*s.* 6*d.* for each case of vaccination at the workhouse in excess of the inclusive salary he was ready and willing to accept from the guardians; and whether he would give instructions to his department that in the future no action should be taken to frustrate the endeavours of local authorities to secure economical administration.—Mr. BURNS replied: The law contemplates that a contract will be entered into with a workhouse medical officer in respect of the vaccination of the persons in the workhouse and that a fee will be paid him in respect of each such vaccination. The remuneration for this purpose cannot properly be included in his salary as the remuneration covers duties which would not devolve on him in the absence of a contract. But the fact that separate provision will be made in respect of fees for vaccination may of course be taken into account in determining the amount of the salary.

The Prosecution of Milk Vendors.

Mr. RENDALL asked the honourable Member for South Somerset, as representing the President of the Board of Agriculture, whether, having regard to circulars issued by the Board concerning milk which fell below the legal standard owing to the conduct of the cow and not owing to the corrupt act of the cow owner or the milk distributor, he proposed to introduce legislation to safeguard milk vendors from prosecution in cases where it was proved that milk had been sold in the condition in which it left the cow.—Sir EDWARD STRACHEY replied: The suggestions made by my honourable friend will receive careful consideration in the event of any further legislation as to the sale of milk being proposed. In the meantime we shall be happy to make inquiries in any case in which it appears that proceedings have been instituted with regard to the alleged adulteration of milk either under a misapprehension of the law or without due consideration of the facts of the particular case.

Mr. RENDALL asked the honourable Member for South Somerset, as representing the President of the Board of Agriculture, whether he would introduce legislation in regard to the sale of milk, to provide that where it was apparent to the inspector under the Sale of Food and Drugs Act that the producer was responsible for the adulteration, and

[1] The provisions of this measure are stated in an annotation (see p. 603).

the distributor had taken the precaution provided for by the Act, the distributor's business should not be damaged by having his name dragged before the public through the medium of the police court.—Mr. JOHN BURNS (President of the Local Government Board) replied to the question. He said: I will note the suggestion in the question for consideration in connexion with any legislation for the amendment of the Sale of Food and Drugs Act; but at present it appears to me that there would be difficulties in adopting the proposal.

Mr. ALDEN: May I ask the right honourable gentleman whether he regards the Act as a protection to the consumer or to the trader?

Mr. BURNS: The object of the Act is primarily to protect the consumer and we ought to try to get both at the distributor and the producer. Under the present law the distributor alone is liable. I hope some day both will be liable.

Vaccination in Scotland.

Mr. MCCALLUM asked the Secretary for Scotland, if the law is to be altered in England regarding compulsory vaccination, on the plea that the impediments placed in the way of conscientious objections were unsatisfactory, when it might be expected that similar advantages would be extended to Scotland.—Mr. SINCLAIR: I have undertaken to consider this question but I am unable at present to give any definite reply to it.

THURSDAY, FEB. 21ST.

The Health of Belfast.

Mr. MCKILLOP asked the Chief Secretary to the Lord Lieutenant of Ireland whether he was aware that a commission was being appointed to inquire into the high death-rate in Belfast and the sanitary regulations in that city; that the names already published did not include any unofficial member of the medical profession; and whether, in view of the importance of the question, he would consider the advisability of appointing to the commission some such representative acquainted with the laws of sanitation in Ireland.—Mr. BIRRELL replied: I understand that my predecessor gave the most careful consideration to the constitution of the departmental committee which has been appointed to inquire into the sanitary condition of Belfast and there appears to be no sufficient reason for adding to the number. In addition to the expert knowledge possessed by the official medical members who have been appointed, the committee will doubtless have the advantage of hearing the views of a number of eminent members of the medical profession who are fully acquainted with the sanitary condition of Belfast and with the laws of sanitation generally.

Medical Inspection in Scotch Schools.

Mr. GULLAND asked the Secretary for Scotland whether his proposed Education Bill for Scotland would include the provision of meals for school children; and whether he would consider the granting of powers for medical inspection and for the establishment of play centres, more stringent regulations for enforcing compulsory attendance, and the extension of the definition of cruelty, so that parents might be prosecuted who allowed their children to be insufficiently clothed or verminous.—Mr. SINCLAIR said in reply: Provision of meals will be included. The various other matters mentioned by my honourable friend are under consideration, but it is not possible as yet to give any further information in regard to the contents of the Bill.

Soldiers and Tuberculosis.

Major SEELY asked the Secretary of State for War how many men were discharged from the army during the past year suffering from tubercle of the lung; how many of these men were sent to their homes, with a notification to the local medical officer of health; and how many were sent directly to hospitals or sanatoriums, stating the particular hospitals or sanatoriums and the numbers sent to each.—Mr. HALDANE answered: The statistics available at the War Office do not contain the required information. It will be necessary to call for returns from all army hospitals at home. When the information has been collected I will have it forwarded to my honourable and gallant friend.

The Royal Commission on Tuberculosis.

Answering Mr. O'GRADY, Mr. RUNCIMAN (Secretary to the Treasury) said: The expenditure on the Royal Commission on Tuberculosis out of the vote for Temporary Commissions up to Jan. 31st, 1907, has been £46,193. I understand that liabilities have also been incurred to the amount of £2700 for stationery and printing.

Pellagra in Egypt.

Mr. JOHN ROBERTSON asked the Secretary of State for Foreign Affairs whether, in view of the prevalence in Egypt of the disease pellagra, resulting from the ingestion of bad maize, he would advise the Egyptian Government to take some such measures of prevention as had been prescribed by the Italian law against pellagra of July 21st, 1902.—Sir EDWARD GREY said: I have no information on the subject but will make inquiries.

MONDAY, FEB. 25TH.

Cerebro-spinal Fever.

Sir HOWARD VINCENT asked the President of the Local Government Board whether, having regard to the recent importation of that dangerous alien disease known as spotted fever, and the rapidity with which it spread, he would issue strict instructions for the inspection of all alien immigrant ships, and, following the precedent of 1892 at the time of the outbreak of cholera at Hamburg, direct that no suspected case should be allowed to land under any pretext.—Mr. JOHN BURNS answered: Cerebro-spinal fever is not necessarily a disease imported from abroad, and at the present time I am not aware that there is any exceptional prevalence of it on the Continent. The circumstances in relation to this disease are different from those affecting an outbreak of cholera such as that referred to in the question. As regards alien immigrants on immigrant ships which come within the Aliens Act, 1905, the hon. Member is aware that they are inspected under the Act, and that the Act requires that leave to land shall be withheld in the case of any such alien if, owing to disease, he appears likely to become a detriment to the public.

Meat Inspection in Scotland.

Mr. WATT asked the President of the Local Government Board whether in view of the dissatisfaction as to the unequal manner in which the officials of local authorities in Scotland carried out their inspection of meat he would appoint a veterinary surgeon, with practical experience of the work, to report on the standard and system of inspection in operation in the different districts.—Mr. SINCLAIR answered: An inquiry into the methods of meat inspection by officers of local authorities in Scotland is now going on.

Infantile Mortality.

Mr. ROGERS asked the President of the Local Government Board whether he intended to introduce any legislation this session dealing with the abnormally high death-rate of children under five years of age; and what steps were being taken to direct the attention of local authorities to this matter.—Mr. BURNS said, in reply: I am giving attention to this subject and I hope that it will be practicable during the present session to introduce legislation bearing upon it. I am impressing on local authorities and their officers by circulars and otherwise the importance of collecting data and studying the problems connected with it.

The Royal Commission on Tuberculosis.

Mr. ALDEN asked the President of the Local Government Board what action he proposed to take in carrying out the conclusions of the Royal Commission on Tuberculosis, seeing that not only the Commissioners but a large number of experts outside the Commission were agreed that far more stringent measures were required than those at present enforced to prevent the sale of such milk as contained tubercle bacilli.—Mr. JOHN BURNS replied: I am giving attention to the report of the Royal Commission but am not at present in a position to take action upon it. The report has only recently been presented and as yet the appendices referred to in it have not been issued. The conclusions of the Commissioners relate to matters of much importance and must be carefully considered both by the Local Government Board and the Board of Agriculture.

The Army Medical Department.

Mr. HALDANE, in the course of his statement on the Army Estimates, said that the deficit of men in the Army Medical Department was very serious indeed. They required 8500 men to look after the hospitals, but they had only 4700, and 2000 reservists, so that the deficit was 1800. That would be a bad thing for successful mobilisation and they would try to draw from civilian sources. He did not forget that on mobilisation they required nurses to go to the hospitals. Various schemes were under consideration and he could not speak with confidence yet. The whole topic of nurses was one which he approached with diffidence as it was one of the most difficult with which he had to deal. Further on in his speech the Secretary for War said that in the case of the army medical element they had to have a special bridge between the first and the second lines of defence, and the special contingent that they wanted for the field force was some 331 medical officers, 30 quartermasters, and 4400 men, which would provide for wastage and give them enough to make up the deficiency which they required for mobilisation of the first line. They proposed to organise—and the negotiations for this were in progress—a large territorial Army Medical Corps analogous to the Regular Army Medical Corps. The British Medical Association had already taken a great interest in the matter and had suggested that the War Office should organise this corps not merely locally but as a great corps—just as the Engineers and the Artillery were great corps—organised under the Director-General of the Army Service Corps. His department had accepted that suggestion and were going to organise one great Army Medical Corps, and they hoped in that way to get a very large number of people connected with the medical profession to take an interest in the army medical branch of the service, both regular and second line. In that fashion they hoped to get both officers and men who would go out on mobilisation. He might say that his department entertained no doubt that they should be able to succeed to some extent in that and, they thought, to the full extent of their desires.

TUESDAY, FEB. 26TH.

X Ray Tubes.

In answer to Mr. WEIR, Mr. HALDANE said: The x ray tubes required for military hospitals are purchased from contractors in this country who obtain many of their supplies from continental manufacturers.

The Dismissal of Poor-law Medical Officers in Scotland.

Mr. CATHCART WASON asked the Secretary for Scotland whether he was aware of the dismissal from office of Dr. George Duncan, the Poor-law medical officer of the parishes of Kintail, Glenshiel, and Lochalsh after 50 years of public service; would he say if he failed or neglected or refused to perform the duties of his office, or if he was found unfit or incompetent to discharge them; had the Local Government Board made any inquiry into the case; and, if so, what reasons had been alleged by the parish councils for his dismissal.—Mr. SINCLAIR replied: I have to reply to the first part of the question in the affirmative, but, as the honourable Member is aware, the Board has no power to interfere in the matter of dismissal of a parochial medical officer. Dr. Duncan, who is the medical officer of the three very large parishes named, is of advanced years, and I understand that as he has failed to implement an agreement made with him three years ago to appoint an assistant he has been asked to resign as from July 1st next. I am not aware that unfitness or incompetency of any kind has been alleged.

A Case of Phosphoric Necrosis.

Sir CHARLES DILKE asked the Secretary of State for the Home Department whether his attention had been called to the fact that a further death from necrosis in the match trade was reported for January of this year; and whether, in view of the international interest taken in the question of phosphorus poisoning, he would issue to the House full details of this case as was done by the then Secretary of State with regard to the cases occurring in 1905.—Mr. GLADSTONE (in a written answer) replied: Yes, Sir. When I heard of this very regrettable occurrence I at once directed a visit to be paid to the factory by the Chief Inspector of Factories and Mr. Cunynghame, one of my Assistant Under Secretaries of State. They have made a report to me which I shall lay upon the table of the House, but I may say that they discovered no breach of the rules. The case was a very exceptional one, the deceased being a man with one leg who had to work in a sitting posture and had also an inveterate habit of chewing tobacco. For both these reasons he was exposed to danger which his fellow workers escaped. He had, moreover, worked in yellow phosphorus for years before special rules were established, and had, it is known, long had the seeds of necrosis in his system. I shall propose an amendment of the special rules to prohibit the chewing of tobacco.

WEDNESDAY, FEB. 27TH.

Guardians and Cerebro-spinal Fever.

Mr. ALDEN asked the President of the Local Government Board whether he would issue to boards of guardians, relieving officers, and Poor-law medical officers the circular as to spotted fever or cerebro-spinal meningitis which he proposed to issue to the sanitary authorities; and further, whether he would suggest to the guardians and relieving officers that poor sick persons and the poor parents of sick children should not at the present time, if they stated that they were unable to pay for a doctor, be deterred from making application for medical assistance by the fear of having the relief made a debt or by the fear of having to come before the guardians or a committee.—Mr. JOHN BURNS replied: I am sending to boards of guardians the memorandum which accompanied the circular referred to with a view to its distribution amongst Poor-law medical officers. As regards the latter part of the question, I have no reason to suppose that persons properly entitled to receive medical relief are deterred from applying for it by the considerations mentioned by my honourable friend and it does not seem to me necessary to communicate with the guardians on the subject.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, 19, Rue Hautefeuille, Paris.

Nouveau Traité de Médecine et de Thérapeutique. Publié en fascicules sous la Direction de MM. P. Brouardel et A. Gilbert. XII. Maladies de la Nutrition: Goutte—Obésité—Diabète. Par H. Richardière, Médecin de l'Hôpital des Enfants Malades, et J. A. Sicard, Médecin des Hôpitaux de Paris. Price fr. 7.

CHURCHILL, J. AND A., 7, Great Marlborough-street, London, W.

Some Points in the Surgical Anatomy of the Temporal Bone from Birth to Adult Life. By Arthur H. Cheatle, F.R.C.S., Aural Surgeon to King's College Hospital and to King Edward VII.'s Hospital for Officers. Price 5s. net.

Une Méthode Simple pour l'Analyse de l'Eau. Spécialement recommandé aux Officiers Médicaux du Service Sanitaire. Par John C. Thresh, M.D. Vic., D.Sc. Lond., D.P.H. Camb., Lecteur et Examinateur de l'Université de Londres. Traduction sur la Cinquième Édition Anglaise (1904). Par MM. les Dr. Magnier, Interne à l'Asile de Maréville et Thiry, G., Chef du Laboratoire de Bactériologie des Cliniques de l'Université de Nancy. Price 2s. 6d. net.

DENT, J. M., AND CO., 29 and 30, Bedford street, London, W.C. DUTTON, E. P., AND CO., New York.

Thomas H. Huxley. By J. R. Ainsworth Davis, M.A., Trinity College, Cambridge. (English Men of Science Series. Edited by J. Reynolds Green, D.Sc.) Price 2s. 6d. net.

ENCYCLOPÆDIC PRESS, 22, Bank-street, Sheffield.

The Kennel Encyclopædia. Under the General Editorship of J. Sidney Turner, M.R.C.S., F.L.S., F.Z.S., &c. (Chairman of the Committee of the Kennel Club). Assisted by Vale Nicolas (one of the Assistant Editors of the Encyclopædia of Legal Precedents). Vol. I., Part I., Abd to Bad. The work will comprise about 16 parts or 4 volumes. Price of each part (to those other than original subscribers) 5s. net.

ENKE, FERDINAND, Stuttgart.

Geschichte der Ohrenheilkunde. Von Dr. Adam Politzer, O. Ö. Professor der Ohrenheilkunde an der Wiener Universität, K. K. Hofrat, Vorstand der K. K. Universitätsklinik für Ohrenkranke im Allg. Krankenhause in Wien. Zwei Bände. I. Band. Von den Ersten Anfängen bis zur Mitte des Neunzehnten Jahrhunderts. Price M. 20.

FISCHER, GUSTAV, Jena.

Einführung in die Versicherungsmedizin. Vorlesungen für Studierende und Aerzte. Von Dr. J. Grober, a.o. Professor an der Universität Jena. Price M. 3.60; geb. M. 4.50.

Stereoskopbilder zur Lehre von den Hernien. Von Professor E. Enderlen, Basel, und Professor E. Gasser, Marburg. Price, bound, M. 28.

FROWDE, HENRY, Oxford University Press, London, New York, and Toronto.

The World's Classics. Price 1s. net. LXXIX. The Dramatic Works of Richard Brinsley Sheridan. With an Introduction by Joseph Knight.—LXXXIX. The Works of Oliver Wendell Holmes. II. The Professor at the Breakfast-table.—XCIV. Scott's Lives of the Novelists. By Sir Walter Scott. With an Introduction by Austin Dobson.—XCV. The Poet at the Breakfast-table. By Oliver Wendell Holmes. With an Introduction by W. Robertson Nicoll.—CXI. The Works of the Right Honourable Edmund Burke. Vol. III. With an Introduction by Frank H. Willis. LXXXVII. Poems of Thomas Hood. With an Introduction by Walter Jerrold. CX. Cranford: The Cage at Cranford: The Moorland Cottage. By Elizabeth C. Gaskell. With an Introduction by Clement Shorter. CXVIII. Horae Subsecivae. By Dr. John Brown. With an Introduction by Austin Dobson. CXX. and CXXI. The Posthumous Papers of the Pickwick Club. By Charles Dickens. CXXII. Mrs. Caudle's Curtain Lectures and other Stories and Essays. By Douglas Jerrold. With an Introduction by Walter Jerrold.

GREEN, WILLIAM, AND SONS, Edinburgh and London.

Green's Encyclopædia and Dictionary of Medicine and Surgery. Vol. III. Earth Burial to Gummi Indicum. Price not stated.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.

Das Wesen des Menschlichen Seelen- und Geisteslebens als Grundriss einer Philosophie des Denkens. Von Professor Dr. Berthold Kern, Generalarzt. Zweite, völlig Neubearbeitete Auflage. Price M. 7.

INTERNATIONAL TRACT SOCIETY, LIMITED, 451, Holloway-road, London, N.

The School of Health. A Guide to Health in the Home. By Alfred B. Olsen, M.D., and M. Ellsworth Olsen, M.A., Editors of "Good Health." Price 5s. net.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., LIMITED, Dryden House, Gerrard-street, London, W.

A Text-book of Ophthalmic Operations. By Harold Grimsdale, M.B., F.R.C.S., Ophthalmic Surgeon and Lecturer on Ophthalmic Surgery to St. George's Hospital, Surgeon to the Royal Westminster Ophthalmic Hospital, and Elmore Brewerton, F.R.C.S., Ophthalmic Surgeon to the Metropolitan Hospital, Surgeon to the Royal Westminster Ophthalmic Hospital. Price 12s. net.

LIGUE CONTRE LE MAL DE MER, 80, Boulevard Port-Royal, Paris.

Le Mal de Mer: Comment on s'en préserve, Comment on le soigne, Comment on en guérit. Guide Hygiénique et Médical Complet du Voyageur à Bord des Navires. Publié par le Comité de la Ligue Contre le Mal de Mer, sous la Direction du Docteur Madeuf, Secrétaire général de la Ligue, Directeur-fondateur de son Journal, Auteur du Livre populaire *La Santé pour Tous*. Seconde édition. Septième Mille. Prix: 3 francs; franco, 3 fr. 40c.

LONGMANS, GREEN, AND CO., 39, Paternoster-row, London, E.C.

Notes on the Care of Babies and Young Children. For the Use of Teachers. By Blanche Tucker, Inspectress of Elementary Schools and Organiser of the Teaching of Cookery and Laundry Work to the Liverpool Education Committee. With an Introduction by Dr. Hope, Medical Officer of Health for Liverpool. Price 1s.

MACMILLAN AND CO., LIMITED, London.

Some Points in the Surgery of the Brain and its Membranes. By Charles A. Ballance, M.V.O., M.S., F.R.C.S., Royal Prussian Order of the Crown, Corresponding Member of the Society of Surgery of Paris, Surgeon to St. Thomas's Hospital and to the National Hospital for the Paralysed and Epileptic, Queen-square, President of the Medical Society of London. Price 15s. net.

Epilepsy: a Study of the Idiopathic Disease. By William Aldren Turner, M.D. Edin., F.R.C.P. Lond., Physician to Out-patients, the National Hospital for the Paralysed and Epileptic, Queen-square, and King's College Hospital, London. Price 10s. net.

MASSON ET CIE, 120, Boulevard Saint-Germain, Paris.

Les Évolutions Pathologiques de la Digestion Stomacale. Par Georges Hayem, Professeur de Clinique Médicale à la Faculté de Médecine de Paris, Membre de l'Académie de Médecine. Price not stated.

Hôpital de la Pitié. Conférences Pratiques sur les Maladies du Cœur et des Poumons. Par le Dr. Louis Rénon, Professeur Agrégé à la Faculté de Médecine de Paris, Médecin de l'Hôpital de la Pitié, Membre de la Société de Biologie. Price Fr. 5.

Traité de Gynécologie Clinique et Opératoire. Par S. Pozzi, Professeur de Gynécologie à la Faculté de Médecine de Paris, Chirurgien de l'Hôpital Broca. Quatrième édition, revue et augmentée avec la Collaboration de F. Jayle. Tome II. Prix de l'Ouvrage complet (2 volumes) Fr. 40.

METHUEN AND Co., 36, Essex-street, Strand, London, W.C.

The Evolution of Life. By H. Charlton Bastian, M.A., M.D., F.R.S., Emeritus Professor of the Principles and Practice of Medicine and of Clinical Medicine in University College, London. Price 7s. 6d. net.

The Drink Problem in its Medico-Sociological Aspects. By Fourteen Medical Authorities. Edited by T. N. Kelynack, M.D., M.R.C.P., Honorary Secretary of the Society for the Study of Inebriety; Editor of "The British Journal of Inebriety." Price 7s. 6d. net.

The Substance of Faith Allied with Science. A Catechism for Parents and Teachers. By Sir Oliver Lodge, F.R.S., Principal of the University of Birmingham. Price 2s. net.

PROGRÈS MÉDICAL (AUX BUREAUX DU), 14, Rue des Carmes, Paris ALCAN FÉLIX, 108, Boulevard St. Germain, Paris.

Premiers Mémoires de Séguin sur l'Idiotie (1838-1843). Publiés par Bourneville, Médecin de Bicêtre et de la Fondation Vallée (Enfants nerveux et idiots). Price Fr. 4.

Traitement Moral, Hygiène et Éducation des Idiots et des Autres Enfants Arriérés. Par Édouard Séguin. Price Fr. 10.

Traitement Médico-Pédagogique des Différentes Formes de l'Idiotie. Par Bourneville. Price not stated.

Recherches Cliniques et Thérapeutiques sur l'Épilepsie, l'Hystérie et l'Idiotie. Compte-rendu du Service des Enfants Idiots, Épileptiques et Arriérés de Bicêtre pendant l'Année 1904. Par Bourneville, avec la Collaboration de Durand, Friedel et Perrin. Volume XXV. Price not stated.

REBMAN, LIMITED, 129, Shaftesbury-avenue, London, W.C.

Food and Hygiene: an Elementary Treatise upon Dietetics and Hygienic Treatment. By William Tibbles, LL.D., L.R.C.P., M.R.C.S., L.S.A., Medical Officer of Health, Fellow of the Royal Institute of Public Health, &c. Price 8s. net.

ROSSEN, F. VAN, Amsterdam.

Opuscula Selecta Neerlandicorum de Arte Medica. Fasciculus Primus quem Curatores Miscellaneorum quæ vocantur Nederlansch Tijdschrift voor Geneeskunde collegerunt et ediderunt ad celebrandam Seriem Quinquagesimam in Lucem nuper editam. Price not stated.

ROUSSET, JULES, Rue Casimir-Delavigne, 1, Paris.

Évolution et Transformisme. Tome troisième. Ire Partie: Les Monériens. Suite et fin. 2e Partie: Les Secrets de la Vie. 3e Partie: La Vie et l'Évolution du Monde Minéral. Price Fr. 3.50.

SCIENTIFIC PRESS, LIMITED, 28 and 29, Southampton-street, Strand, London, W.C.

A Manual for Nurses on Abdominal Surgery. By Harold Burrows, M.B., F.R.C.S., Assistant Surgeon to the Seamen's Hospital, Greenwich, and to the Bolingbroke Hospital, Wandsworth Common. Price 2s. 6d. net.

Skin Diseases, their Nursing and General Management. By G. Norman Meachen, M.D., B.S. Lond., M.R.C.P. Lond. and Edin., M.R.C.S. Eng., Physician for Skin Diseases, Tottenham Hospital; Lecturer in Dermatology, North-East London Post-Graduate College. Price 2s. 6d. net.

The Care and Nursing of the Insane. By Percy J. Baily, M.B., C.M. Edin., Medical Superintendent of Hanwell Asylum. Part I., Anatomy and Physiology. Price 1s. net.

Burdett's Hospitals and Charities. 1907. By Sir Henry Burdett, K.C.B. Price 7s. 6d. net.

SHERRATT AND HUGHES, 60, Chandos-street, London, W.C.

The Journal of Obstetrics and Gynæcology of the British Empire. Editor: Charles J. Cullingworth, M.D. Assistant Editor: John S. Fairbairn, M.B. Volume X. July to December, 1906. Price 12s. 6d. net.

SMITH, ELDER, AND Co., 15, Waterloo-place, London, S.W.

Saint Bartholomew's Hospital Reports. Edited by A. E. Garrod, M.D., and W. McAdam Eccles, M.S., F.R.C.S. Vol. XLII. Price not stated.

WILSON, EFFINGHAM, 54, Threadneedle-street, London, E.C.

The Cornish Tin Mining Manual. By H. A. H. Russell. Price 1s.

YEAR BOOK PUBLISHERS, Chicago. (G. GILLIES & Co., 28, Gibson-street, Hillhead, Glasgow.)

The Practical Medicine Series. Under the General Editorial Charge of Gustavus P. Head, M.D. Volume X. Skin and Venereal Diseases, Nervous and Mental Diseases. Edited by W. L. Baum, M.D., Hugh T. Patrick, M.D., William Healy, A.B., M.D. Price 5s.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

DODIE, W. HENRY, M.B., C.M. Edin., M.R.C.S., has been appointed Honorary Surgeon to the Chester Infirmary.

GLEGG, R. ASHLEIGH, M.D., Ch.B. Edin., D.P.H., has been appointed Assistant Medical Officer of Health of the County of Ayr.

GOULD, HAROLD UTTERTON, M.A., M.B., B.C. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer by the Shaftesbury (Dorset) Board of Guardians.

GREEN, T. A., M.D., F.R.C.S. Edin., has been appointed Surgeon in Charge of the Nose, Throat, and Ear Department at the Bristol Royal Hospital for Sick Children and Women.

GROVES, E. J. C., M.B., Ch.B. Edin., has been appointed House Surgeon at the Brighton, Hove, and Preston Dispensary.

HANLY, THOMAS FRANCIS, L.R.C.P., L.R.C.S., L.M. Edin., has been appointed Medical Officer of Health for the Shaftesbury (Dorset) Rural District.

HARTIGAN, T. J. P., F.R.C.S. Eng., has been appointed Dermatologist to the Alexandra Hospital, Queen-square, W.C.

JOHNSTONE, G. A., M.B., Ch.B. Aberd., has been appointed House Surgeon at the Bangor Infirmary.

MACPHAIL, DUGALD H., M.B., Ch.B. Glasg., has been appointed Extra Physician to the Glasgow Central Dispensary.

MAY, W. NORMAN, M.B., B.S. Lond., has been appointed Resident Medical Officer at the East London Hospital for Children and Dispensary for Women.

SEWELL, D. LINDLEY, M.B., B.S. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Assistant Surgeon to the Manchester Ear Hospital.

WILLIAMS, LIONEL HENRY, M.D. Durh., M.R.C.S., L.S.A., has been appointed Deputy Medical Officer for the Thornbury (Gloucestershire) District and Workhouse.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ABERDEEN UNIVERSITY.—McRobert Fellowship for Cancer Research Salary £200 to £250.

ASHTON-UNDER-LYNE DISTRICT INFIRMARY AND CHILDREN'S HOSPITAL.—House Surgeon. Salary £120 per annum and fees. Also Junior House Surgeon for six months. Salary at rate of £50 per annum. Board, rooms, washing, &c., in each case.

BIGGLESWADE RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary £100 per annum.

BIGGLESWADE URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary £25 per annum.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—House Surgeon. Salary £100, with board, residence, and laundry.

BIRKENHEAD UNION INFIRMARY, WORKHOUSE, AND SANATORIUM.—Resident Assistant Medical Officer. Salary £120 per annum, with board, washing, and apartments.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Surgical Officer. Salary £104 per annum, with apartments, rations, &c.

BODMIN, CORNWALL COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £140 a year, rising to £160, with rooms, rations, laundry, and attendance.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Third House Surgeon, unmarried. Salary £50 per annum, with board and residence.

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £80, with board and residence.

BRISTOL GENERAL HOSPITAL.—Pathologist. Salary £240 per annum.

CANCER HOSPITAL, Fulham-road, London, S.W.—House Surgeon. Salary £80 per annum.

CARLISLE, CUMBERLAND INFIRMARY.—Resident Medical Officer as House Physician and House Surgeon for six months each. Salary at rate of £80 and £100 per annum respectively, with board, lodging, and washing.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—Assistant Surgeon.

CHARING CROSS HOSPITAL.—Medical Registrar. Salary £40 per annum, with lunch and tea.

CROYDON GENERAL HOSPITAL.—Junior House Surgeon. Salary £60, with board, laundry, and residence.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant Resident Medical Officer for six months. Salary at rate of £50 a year, with board, lodging, and laundry.

ECCLES AND PATRICROFT HOSPITAL.—House Surgeon, unmarried. Salary £70 per annum, with board and washing.

GLASGOW EYE INFIRMARY.—Resident Assistant House Surgeon. Salary £75, with apartments and board.

GROCERS' COMPANY'S SCHOLARSHIPS.—Two Scholarships for Research in Sanitary Science. Value £300 a year, with allowance to meet cost of apparatus, &c.

HERTFORD GENERAL INFIRMARY.—Resident House Surgeon and Secretary. Salary £100 per annum, with board, washing, and apartments.

HOSPITAL FOR EPILEPSY AND OTHER DISEASES OF THE NERVOUS SYSTEM, Maida Vale.—Resident Medical Officer for six months. Salary at rate of £50 a year, with board and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Anæsthetist.

ILKESTON, BOROUGH OF.—Medical Officer (female). Salary £100 per annum.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Assistant House Surgeon. Salary £75 per annum, with residence, board, and washing.

LIVERPOOL DAVID LEWIS NORTHERN HOSPITAL.—House Surgeon, also House Physician. Salary £60 each per annum, with residence and maintenance.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. Salary £30, with board and lodging.

LIVERPOOL, ROYAL SOUTHERN HOSPITAL.—Three House Physicians and Three House Surgeons. Salary at rate of £60 per annum, with board and residence.

MANCHESTER CHILDREN'S HOSPITAL.—Junior Resident Medical Officer, unmarried, for six months, eligible for election as Senior Medical Officer for another six months. Salaries at rate of £80 and £100 a year, with board and lodging.

MANCHESTER EAR HOSPITAL.—Clinical Assistant for six months.

MANCHESTER, ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Fourth House Surgeon for six months. Honorarium of £25, with board and residence.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, Assistant House Physician, and Assistant House Surgeon, all for six months.

NORTHAMPTON, SAINT ANDREW'S HOSPITAL FOR MENTAL DISEASES.—Third Assistant Medical Officer. Salary £150 per annum, rising to £200, with board, lodging, and washing.

READING, ROYAL BERKSHIRE HOSPITAL.—House Physician. Also Assistant House Surgeon. Salaries £80 and £60 per annum respectively, with board, lodging, and washing.

ST. LEONARDS-ON-SEA, CHELSEA HOSPITAL FOR WOMEN, CONVALESCENT HOME.—Honorary Medical Officer.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square.—Honorary Obstetric Physician.

STAFFORD, STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House Surgeon for six months. Salary £31, with board, residence, and laundry.

WANDSWORTH UNION INFIRMARY, St. John's Hill, near Clapham Junction.—Male Junior Assistant Medical Officer, unmarried, for six months. Salary at rate of £100 a year, with board, lodging, and washing.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon, unmarried. Salary £50 per annum, with board, residence, and washing.

Births, Marriages, and Deaths.

BIRTHS.

AUDEN.—On Feb. 21st, at Bootham, York, the wife of George A. Auden, M.A., M.D. Cantab., of a son.

BADCOCK.—On Feb. 23rd, at Standerwick, Margate, the wife of J. H. Badcock, L.D.S., M.R.C.S., L.R.C.P., of a daughter.

MURRAY.—On Feb. 21st, at 2, Chevening-road, Kilburn, N.W., the wife of R. Galway Murray, M.R.C.S., L.R.C.P., D.P.H., of a daughter.

THOMPSON.—On Feb. 20th, at 1, Hyde-gardens, Clarendon-road, Leeds, the wife (née A. E. Hooper, M.B., B.S. (London)) of Walter Thompson, F.R.C.S., of a daughter.

MARRIAGE.

SARGENT—ASHMAN.—On Feb. 21st, at the Congregational Church Sneyd Park, Bristol, by the Rev. R. Glover, D.D., and the Rev. E. Medley, B.A., Percy W. G. Sargent, M.A., M.B., B.C., F.R.C.S., of Harley-street, W., eldest son of Mr. and Mrs. E. G. Sargent of Pembroke-road, Clifton, to May, younger daughter of Sir Herbert and Lady Ashman of Cook's Folly, Bristol.

DEATHS.

FOULDS.—On Feb. 25th, at Severn House, Droitwich, aged 13 months, Clifford Samuel, the beloved child of Dr. and Mrs. Foulds.

FRANCIS.—On Feb. 20th, at Clarence-road, Teddington, Thomas Francis, L.R.C.P., M.R.C.S., L.S.A., in his 85th year.

MURRAY.—On Feb. 1st, at Graaff Reinet, Cape Colony, Frank Everitt Murray, B.A., M.B., B.C. Cantab., F.R.C.S. Eng., in his 34th year.

NORRIS.—On Feb. 22nd, at Fawcett-road, Southsea, Edwin John Norris, M.R.C.S., L.R.C.P., L.S.A., aged 45.

PEAKE.—On Feb. 16th, at 223, Goldhawk-road, W., Rowland Mabbatt, only son of Solomon Peake, M.R.C.S., aged 21 years.

N.B.—A fee of 2s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A RETIRED MEDICAL MAN AND GOOD OPENINGS.

In the issue of THE LANCET of Feb. 23rd the following advertisement was published:—

Wanted, by Medical Man with some private means but limited capital, a small PRACTICE or NUCLEUS, with good scope for increase. Preferably unopposed and in Country district, South of England for choice. Moderate sized house, with grounds, &c., necessary. Premium must be small.—Address, No. 285, THE LANCET Office, 423, Strand, W.C.

One of the replies to the advertisement has been forwarded to us by the advertiser and we think merits publication, as it comes from a medical man but shows a remarkable ignorance of the rules that should govern the mutual conduct of members of a profession:—

6, Stone St. Faversham, Kent, Feb. 24, 07.

In replying mention No. 285, LANCET.

DEAR SIR,—An excellent opportunity occurs about 20 miles from London (South) where there is a population of over 7000 with one unpopular medical man. There is no doubt a good practice to be made in a short time by an energetic cyclist. A wealthy resident has two good houses empty with grounds to let at £45 and £55. He is desirous of getting another doctor there for himself and his tenants, as well as, for others who are not satisfied with the present man. There is a third good house to let in a prominent situation at £40. Three reception-rooms, six bedrooms and garden, coach-house and stables can be had. Gravel soil. Lovely country. High ground. Large works are about to be begun in this place employing thousands of hands, so that now is the time for anyone to start. This scheme will increase the population to a great extent, bringing large numbers of all classes and improve the place beyond recognition. I can insure the support of any good man by my wealthy friend, the Rector and other friends I have there.

I am asking a small premium to be agreed upon at an interview. I should say that 3 hundred or more would be done the first year; but the possibilities of the place as a field for medical work are very good. I am, yrs. faithfully,

F. F. JAY, M.D.

I am a retired doctor, and have been asked to find a man to take this fine chance up.

This is not the first time that it has been brought to our notice that Dr. Jay replies to advertisements in THE LANCET with offers to introduce the advertisers to remunerative practices in return for a premium. We recommend our advertisers not to reply to Dr. Jay. The medical agents are much more likely to be able to introduce advertisers to the opening which they require than any medical man, retired or otherwise, can possibly be. A medical man may know of a good opening in his immediate neighbourhood, but we do not admire the frame of mind which tempts him to try to obtain a small premium for the information. All such openings must be at the expense of some medical colleagues already resident in the neighbourhood.

THE ARGEMONE MEXICANA.

To the Editors of THE LANCET.

SIRS,—In reply to "Enquirer" in THE LANCET of Feb. 16th, p. 477, the plant to which he refers, *Argemone Mexicana*, was formerly considered to contain morphine, but this alkaloid has been proved to be absent by J. O. Schlotterbeck (*Journal of the American Chemical Society*, Vol. XXIV., p. 238). The plant contains the alkaloids berberine and protopine, of which the latter is identical with the base erroneously called argemonine by Peckolt. Schlotterbeck found a considerable quantity of potassium nitrate among the inorganic salts present in the plant. As the drug has attracted some little attention in the United States there should be no difficulty in obtaining preparations of it by ordering the same of a wholesale druggist.

I am, Sirs, yours faithfully,

Feb. 24th, 1907. HESPERUS.

TORQUE.

To the Editors of THE LANCET.

SIRS,—In reading the last paragraph under the heading of "Looking Back" in THE LANCET of Feb. 23rd I was puzzled as to the meaning of the word "tonque" and could not find it in any dictionary at my disposal. Then it dawned on me that the word was probably "torque," meaning a *twisted* metal collar worn around the neck by the ancient Gauls and British chiefs and apparently originating with the Persians. It was made of gold or bronze and the ends of the broken circle usually terminated in ornamental knobs or in turned back hooks for interlocking. I have learnt that in B.C. 361 Titus Manlius Imperiosus Torquatus wore one which was a personal trophy, hence the name Torquatus. I found a reference to it also in Smith's "Antiquities" and in Fairholt's "Terms in Art." There are also several in the gold ornament room at the British Museum. Some are in the Sir A. Wollaston Franks's bequest and others are in the Morel collection. One gold torc (a variant spelling adopted by the British Museum) was found at Swineford, co. Mayo, in 1868 at a depth of eight feet. Another large gold one was found in 1856 at Ashill, near Watton, in Norfolk, and a reference is given to Norfolk Archæology, Vol. V., p. 193. Others were found at Boyton in Suffolk, one in Lincolnshire, four near Elgin in Scotland, one at Ballinameen, near Boyle, co. Roscommon, and a large one at Castlemont, Dover, presented by Mr. Robert Chignell in 1891. Several bronze ones were obtained from Gaulish cemeteries in the department of the Marne, France. It appears that they often formed a great part of the wealth of the wearer. I see that the Welsh call it "torch" and "Gorthorch." If "torque" was the word meant, this note may perhaps interest some of your readers.

I am, Sirs, yours faithfully,

London, Feb. 25th, 1907. X. Y. Z.

HUDIBRASTIC LANGUAGE.

A CORRESPONDENT has asked us the meaning that it was intended to convey when using the expression "Hudibrastic vocabulary" in a leading article last week. The language of Hudibras, as described by his immortal creator, is almost precisely that of certain modern text-books, the contents of which are often worthy of better exposition. The more grotesquely involved the language of such books is, the more closely is it humbly followed by certain modern advertisements. The following is Butler's description of his hero's language:—

"His speech,
In loftiness of sound, was rich
A Babylonish dialect,
Which learned pedants much affect;
It was a party-colour'd dress
Of patch'd and piebald languages;
'Twas English cut on Greek and Latin,
Like fustian heretofore on satin;
It had an odd promiscuous tone,
As if h'had talk'd three parts in one.
Which made some think, when he did gabble,
Th'had heard three labourers of Babel,
Or Cerberus himself pronounce
A leash of languages at once."

THE COMPOSITION OF BOOT BLACKING.

To the Editors of THE LANCET.

SIRS,—Having seen a paragraph in your issue of Feb. 16th referring to the alleged evil effects of sundry boot blackings, we, as one of the very oldest firms of blacking manufacturers, write to bring to your notice the following facts. At the exhibition of 1862 we were awarded the only gold medal for blacking; before the award was made our Meltonian blacking was subjected to the most severe analysis and it was proved that there was absolutely nothing of an injurious nature in it, but that, on the contrary, all the ingredients tended to soften and preserve the leather. Our endeavour has always been to keep our preparations up to this very high standard; that our endeavour has been successful is shown by their unique reputation, not only in this country but all over the civilised world. Our reason for writing is that we feel, as no doubt other high-class manufacturers will feel also, that a charge has been brought against the whole trade that is absolutely false in the case of those makers who have a reputation to lose.

We are, Sirs, yours faithfully,

E. BROWN AND SON,
Manufacturers of Meltonian blacking and other boot preparations.

7, Garrick-street, W.C., Feb. 26th, 1907.

THE NATIONAL REGISTRATION OF PLUMBERS.

THE clerk to the Worshipful Company of Plumbers has forwarded to us a facsimile of the portable registration ticket for the year 1907 which is granted by the company to a registered plumber. The ticket contains spaces for the name and address of the registered plumber and for his signature, while the date of the year for which the certificate is valid is printed in large type across the face. The colour of the date will vary each year and for the current year it is of a purplish-pink colour. Complaints, if any such exist, of work done by registered plumbers should be addressed to the Worshipful Company of Plumbers in order that the company may deal with the matter in the public interest. Plumbing is, of course, so important a trade as regards sanitation that it is necessary for the health of the public that its members should have some means of distinguishing between the competent and the incompetent as it is in the case of those to whom they intrust the care of their bodies, and we are therefore glad to congratulate the Plumbers' Company upon the steps which it has taken with a view to secure this desirable result.

THE FINGER-STALL TEAT.

THE finger-stall teat is designed to avoid certain deformities of the mouth which Dr. T. F. Pedley maintains are caused by the sucking of ordinary rubber teats and "baby comforters." Dr. Pedley attributes to the unnatural pressure of most of the teats in use upon the baby's jaws certain deformities of the roof of the mouth and the interior of the nose which are subsequently followed, he says, by obstructions to breathing through the nose. When the shape and pliability of the teat are that of a good-sized rubber finger-stall the infant requires to make little effort in order to abstract the milk. The finger-stall teat is supplied by Messrs. Lynch and Co., Limited, of Silver-street, Falcon-square, London, E.C.

DEFECTIVE CHILDREN.

To the Editors of THE LANCET.

SIRS,—In reply to "Quaerens" in THE LANCET of Feb. 16th, p. 473, and to another correspondent in your last issue, may I mention in this regard Shuttleworth's "Mentally Deficient Children: their Treatment and Training" (Lewis, Gower-street, W.C.). The second edition contains chapters on Provision for Special Classes under the Act of 1899.

I am, Sirs, yours faithfully,

Feb. 20th, 1907. RESPONDENS.

Diplomate.—Information with reference to the Brussels M.D. will be found in the Students' Number of THE LANCET, Sept. 1st, 1906, p. 564. The degree is registrable in this country if obtained prior to 1886. The secretary of the Brussels Graduates' Association is Dr. F. H. Edwards, whose address is Camberwell House, Peckham-road, London, S.E. Dr. A. R. Henchley, of 1, London-road, Canterbury, publishes a pamphlet containing notes on the Brussels M.D. examination and examples of the questions set.

F. J.—There is no reason why the parties should not marry supposing that such portion of the family history as is common to both is good. In the other event they should not marry, as the risk of perpetuating any taint would be considerable.

H. C. G.—We do not think our contributor's amusing note can be regarded as a serious contribution to surgery.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (3 P.M.), St. Mark's (2.30 P.M.).

TUESDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), West-minster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.), Tottenham (2.30 P.M.).

WEDNESDAY (6th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), West-minster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.).

THURSDAY (7th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.), Tottenham (Gynæcological, 2.30 P.M.).

FRIDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.).

SATURDAY (9th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London phthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (4th).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—9 P.M.: Lettsomian Lecture:—Dr. C. E. Beevor: The Diagnosis and Localisation of Cerebral Tumours.

TUESDAY (5th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M.: Papers:—Dr. F. H. Thiele: Two Cases of Cystinuria with Excretion of Diamines.—Dr. B. I. Spriggs: The Excretion of Creatinin in Pseudohypertrophic Muscular Dystrophy.—Dr. A. R. Russell: A Case of Sulphæmoglobinæmia.—Dr. O. Grünbaum: An Apparatus for Estimating the Electric Conductivity of Small Quantities of Liquids.—Dr. A. E. Garrod and Dr. T. W. Clarke: A New Case of Alkaptonuria.

WEDNESDAY (6th).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M.: Specimens will be shown by Dr. A. Routh, Dr. Blacker, and Dr. C. H. Roberts. Short Communication:—Mr. A. Dorsan: After-history of a Case of Fibroid of Broad Ligament associated with an Ovarian Cyst reported in Vol. XLIII. of the Society's Transactions. Inaugural Address:—The President (Dr. H. R. Spencer).

SOCIETY OF ARTS (John-street, Adelphi, W.C.).—8 P.M.: Prof. W. B. Dawkins: The Discovery of the South-Eastern Coalfield.

THURSDAY (7th).—NEUROLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos street, Cavendish-square, W.).—8.30 P.M.: Paper:—Dr. H. Howell and Dr. L. Jones: The Effects of Cervical Ribs.

HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8.30 P.M.: Discussion on the Diagnosis and Treatment of Fractures in the Neighbourhood of a Joint (opened by Mr. W. Cheyne who will illustrate his remarks with skiagraphs), Prof. H. Marsh, Mr. B. Owen, Mr. P. Gould, Mr. A. Lane, Mr. R. Jones (Liverpool), and Mr. L. Thomas (Cardiff) have promised to take part in the Discussion.

NORTH-EAST LONDON CLINICAL SOCIETY (Tottenham Hospital, N.).—4 P.M.: Clinical Cases.

FRIDAY (8th).—WIMBLEDON AND DISTRICT MEDICAL SOCIETY (Worple Hall, Worple-road, Wimbledon).—9 P.M.: Paper:—Dr. W. S. Colman: Pitfalls in Diagnosis.

CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M.: Papers:—Dr. G. A. Sutherland: The Medical Treatment of Congenital Pyloric Stenosis.—Dr. A. F. Voelcker: Some Cases of Pyloric Stenosis in Infants.—Mr. F. F. Burghard: The Surgical Treatment of Congenital Pyloric Stenosis.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION (11, Chandos-street, Cavendish-square, W.).—4.30 P.M.: General Meeting. Exhibition of Cases and Specimens.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (4th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. C. Fox: Clinique. (Skin.) 5.15 P.M.: Lecture:—Dr. W. D'Este Emery: Lumbar Puncture, its Value in Diagnosis and Treatment.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—12 noon: Pathological Demonstration:—Dr. G. C. Low. 2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: Operations. X Rays. Mr. Dunn: Diseases of the Eye. 5 P.M.: Clinical Lecture:—Mr. Paget.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—9.30 A.M.: Clinique:—Surgical Out-patient (Mr. H. Evans). 2.30 P.M.: Cliniques: Medical Out-patient (Dr. Whipham), Throat, Nose, and Ear (Mr. Carson); X Ray Demonstration (Dr. Pirie).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Sir D. Duckworth: Medicine. 3.15 P.M.: Mr. W. Turner: Surgery. 4 P.M.: Dr. StClair Thomson: Diseases of the Throat, Nose, and Ear. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat. 2.30 P.M.: Special Lecture:—Sir Dyce Duckworth: Treatment of Pneumonia.

TUESDAY (5th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. G. A. Sutherland: Clinique. (Medical.) 5.15 P.M.: Lecture:—Dr. G. H. Graham: Radium and its Medical Uses.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. M. Moullin: Gynæcological. 2 P.M.: Medical and Surgical Clinics. Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. X Rays. Dr. Abraham: Diseases of the Skin. 5 P.M.: Lecture:—Mr. Bidwell: Plaster of-Paris Splints.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—10.30 A.M.: Clinique:—Medical Out-patient (Dr. Auld). 2.30 P.M.: Surgical Operations (Mr. Carson); Cliniques: Gynæcological Out-patient (Dr. Giles), Surgical Out-patient (Mr. Edmunds). 4.30 P.M.: Lecture:—Dr. G. F. Still: Nervous Children.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. R. T. Hewlett: Medicine. 3.15 P.M.: Mr. Cariess: Surgery. 4 P.M.: Mr. M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Dr. Batten: Syringomyelia.

CHARING CROSS HOSPITAL.—4 P.M.: Demonstration:—Dr. Forsyth: (Medical). (Post-Graduate Course.)

WEDNESDAY (6th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. P. Paton: Clinique. (Surgical.) 5.15 P.M.: Lecture:—Dr. D. Grant: Laryngeal Phthisis.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. Dr. Saunders: Diseases of Children. 2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: Operations. X Rays. 5 P.M.: Mr. L. Williams: Fractures of the Jaw and their Treatment.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—2.30 P.M.: Cliniques:—Dermatological (Dr. Meachen), Ophthalmological (Mr. Brooks), Medical Out-patient (Dr. Whipham).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. F. Taylor: Medicine. 3.30 P.M.: Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M.: Lecture:—Dr. Hartley: Bronchiectasis.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M.: Demonstration:—Dr. W. Wingrave: Clinical Pathology.

THURSDAY (7th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M.: Lecture:—Dr. A. Whitfield: Lichen Planus.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: Operations. X Rays. Mr. Dunn: Diseases of the Eye. 5 P.M.: Lecture:—Mr. Keetley: Appendicostomy.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—2.30 P.M.: Gynæcological Operations (Dr. Giles). Cliniques:—Medical (Dr. Whiting), Surgical Out-patient (Mr. Carson). 3 P.M.: Clinique:—Medical In-patient (Dr. Chappel).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. G. Rankin: Medicine. 3.15 P.M.: Sir W. Bennett: Surgery. 4 P.M.: Dr. H. Cooper: Radiography. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat. 3.15 P.M.: Special Lecture:—Sir Wm. Bennett: Stiffness of the Spine.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—6 P.M.: Chesterfield Lecture:—Dr. M. Dockrell: On the Usefulness or Otherwise of the Electrical Methods of Treatment in Skin Diseases.

CHARING CROSS HOSPITAL.—4 P.M.: Mr. Gibbs: Demonstration (Surgical). (Post-Graduate Course.)

HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M.: Lecture:—Dr. Garrod: Chorea.

FRIDAY (8th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. H. L. Eason: Clinique. (Eye.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. M. Mouillin: Gynæcological. 2 P.M.: Medical and Surgical Clinics. Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. X Rays. Dr. Abraham: Diseases of the Skin. 5 P.M.: Lecture:—Dr. S. Taylor: Treatment of Enteric Fever.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—9.30 A.M.: Clinique:—Surgical Out-patient (Mr. H. Evans). 2.30 P.M.: Surgical Operations (Mr. Edmunds). Cliniques:—Medical Out-patient (Dr. Auld), Ophthalmological (Mr. Brooks). 3 P.M.: Clinique:—Medical In-patient (Dr. Leslie).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. R. Bradford: Medicine. 3.15 P.M.: Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Dr. Batten: Subacute Combined Degeneration of Spinal Cord.

SATURDAY (9th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. 2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: Operations. X Rays.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich.)—2.30 P.M.: Operations. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

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THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1906, which was completed with the issue of Dec. 29th, were given in THE LANCET of Jan. 5th, 1907.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 28th, 1907.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Rainfall.	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Feb 22	29·740	N.W.	...	75	40	35	34	35	Cloudy
,, 23	29·944	N.	...	60	41	27	...	28	Fine
,, 24	30·220	W.	...	79	44	28	...	30	Fine
,, 25	30·242	W.	...	63	50	30	43	44	Overcast
,, 26	30·384	W.	...	49	45	42	42	43	Overcast
,, 27	30·476	N.	...	58	48	43	42	45	Cloudy
,, 28	30·578	S.W.	...	44	44	36	37	37	Foggy

During the week marked copies of the following newspapers have been received:—*Evening Telegraph (Toronto), Shipley Times, Notts Express, Weekly Times and Telegraph, Footwear, Nottingham Daily Express, Bombay Gazette, The Baker and Confectioner, Newcastle Chronicle, Bristol Times, Manchester Courier, Standard, Yorkshire Telegraph, Tribune, Daily Chronicle, Telegraph, Morning Post, Morning Leader, Liverpool Post, Sheffield Telegraph, Coventry Herald, Local Government Journal, Carlisle Express, &c.*

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